PENGARUH BIAYA PRODUKSI TERHADAP PENJUALAN PADA PT. PT SHINDENGEN INDONESIA

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ABSTRACT

Sales is the main thing in the company, because the main source of income comes from the sale. This study aimed to determine the effect of the cost of production to sales at PT. Shindengen Indonesia. This study used quantitative analysis techniques, which are becoming variable x is a variable y, while production costs are the result of the sale. Data in the form of time series data is data production costs and sales results from January 2013 to December 2015.Penulis using correlation analysis, regression and determination, and the data were processed using SPSS version 21. The results showed that there is a very strong relationship of 0.998 between production costs with sales and coefficient of determination shows R Square of 99.6% where the results of sales at PT Shindengen Indonesia affected by the cost of production amounted to 99.6%, remaining at 0.4% influenced by other variables that are not analyzed in this study. Based on hypothesis testing by t test obtained t count> t table (87 945> 2.032), then Ho is rejected, it means that there are significant effect between production costs with sales results. To suppress the increase in production costs as a result of failure cost PT Shindengen Indonesia should provide guidance to employees to keep concentration at work and always adhere to the intruction work or work instructions so as to reduce production costs and profits can be increased.

Key words: Costs of production, sales

I. PENDAHULUAN

Penjualan adalah merupakan hal utama dalam perusahaan, karena sumber pendapatan yang utama berasal dari penjualan. Perusahaan melakukan strategi untuk mendapatkan hasil penjualan yang maksimal. Salah satunyadengan memperhatikan proses pembuatan produk dengan sebaik mungkin sehingga menghasilkan produk yang berkualitas. PT Shindengen Indonesia perusahaan manufaktur yang bergerak dibidang otomotif yaitu memproduksi regulator untuk kendaraan roda dua. Dalam memproduksi produk tersebut PT Shindengen Indonesia sangat memperhatikan proses pembuatan produk, membuatnya sesuai dengan intruksi kerja yang sudah tertera pada proses tersebut. Hal ini diharapkan memperkecil kemungkinan terjadinya salah dalam pemakaian bahan atau salah proses dalam merakit dan tentunya dapat memperkecil biaya produksi.

Seiring pergantian tahun harga barang mentah melonjak naik, maka biaya produksi pun semakin naik seiring dengan bertambah mahalnya barang barang material yang akan diolah dan hal ini akan mempengaruhi penjualan yang dilakukan. Untuk itu perusaaan melakukan langkah dengan menomor satu kan kualitas agar customer atau pelanggan tetap percaya dengan produk yang kita hasilkan itu adalah salah satu cara agar hasil penjualan setiap bulannya tidak ada penurunan.

Dengan begitu ketika perusahaan ingin menaikkan harga jual terhadap produk 77*customer* atau pelanggan tidak keberatan dengan harga yang kita tawarkan, karena *customer* atau pelanggan telah menegetahui kualitas produk yang kita hasilkan. Hasil penjualan sangatlah berpengaruh terhadap keuangan perusahaan, semakin hasil nya meningkat semakin besar kemungkinan laba yang diperoleh apabila perusahaan tersebut dapat menstabilkan biaya produksi.

II. TINJAUAN PUSTAKA

2.1. Biaya Produksi

A. Pengertian Biaya Produksi

Mulyadi (2009:14) mendefinisikan biaya produksi adalah biaya-biaya yang terjadi untuk mengolah bahan baku menjadi barang jadi yang siap dijual.

Karyana (2008:81) mendefinisikan biaya produksi adalah biaya-biaya yang dikeluarkan dalam proses produksi atau semua beban yang ditanggung oleh produsen untuk menghasilkan suatu barang atau jasa.

Berdasarkan pengertian tersebut yang dimaksud dengan biaya produksi adalah semua biaya yang disebabkan karena adanya proses produksi. Biaya produksi dalam suatu perusahaan

(khususnya manufaktur) merupakan bagian terpenting dalam proses produksi, hal ini dikarenakan biaya produksi dalam perusahaan tersebut merupakan pengeluaran yang paling besar diantara biaya-biaya yang lain dan terjadi terus menerus selama proses produksi terus berjalan.

B. Unsur-Unsur Biaya Produksi

Carter (2009:40) menyatakan bahwa unsur-unsur biaya produksi adalah sebagai berikut:

1. Biaya bahan baku langsung

   Bahan baku merupakan bahan yang membentuk bagian menyeluruh produk jadi, bahan baku yang diolah dalam perusahaan manufaktur dapat diperoleh dari pembelian lokal, impor, atau dari pengolahan sendiri. Didalam memperoleh bahan baku, perusahaan tidak hanya mengeluarkan biaya sejumlah harga beli bahan baku saja, tetapi juga mengeluarkan biaya-biaya pembelian, pergudangan, dan biaya-biaya perolahan lain. Timbul masalah unsur biaya apa saja yang diperhitungkan sebgai harga pokok bahan baku yang dibeli. Transaksi pembelian lokal bahan baku melibatkan bagian-bagian produksi, gudang, pembelian, penerimaan barang, dan asuransi. Dokumen sumber dan dokumen pendukung yang dibuat dalam transaksi pembelian lokal bahan baku terdiri dari prosedur permintaan pembelian lain, prosedur order pembelian, prosedur penerimaan barang digudang dan prosedur pencatatan hutang.

   Biaya bahan baku langsung adalah semua bahan baku yang membentuk bagian integral dari produk jadi dan dimasukkan secara eksplisit dalam perhitungan biaya produk. Contoh dari bahan baku langsung adalah kayu yang digunakan untuk membuat furniture dan minyak mentah yang digunakan untuk membuat bensin. Kemudahan penelusuranitem bahan bakutersebut ke produk final merupakan pertimbangan utama dalam mengklasifikan suatu biaya sebagai bahan baku langsung. Misalnya saja, jumlah paku di furnitur merupakan bagian integral dari barang jadi, tetapi karena biaya dari paku yang diperlukan untuk setiap furnitur tidak signifikan, maka paku diklasifikan sebagai bahan baku tidak langsung.

2. Biaya tenaga kerja langsung

   Tenaga kerja langsung merupakan pelaku utama dalam produksi, pengeluaran biaya-biaya untuk gaji atau upah tenaga kerja juga sangat besar. Menurut Halim (2010:73) "biaya tenaga kerja langsung didefinisikan sebagai pembayaran-pembayaran kepada para pekerja yang didasarkan pada jam kerja atau atas dasar unit yang diproduksi.

   Biaya tenaga kerja langsung adalah biaya tenaga kerja yang melakukan konversi bahan baku langsung menjadi produk jadi dan dapat dibebankan secara layak ke produk tertentu. Di pabrik yang sangat terotomatisasi, dua masalah sering muncul ketika dilakukan usaha untuk mengidentifikasikan tenaga kerja langsung sebagai elemen biaya yang terpisah. Pertama, pekerja yang sama melakukan berbagai tugas. Mereka dapat bergantian mengerjakan tugas tenaga kerja langsung kemudian tugas tenaga kerja tidak langsung secara cepat dan sering, sehingga biaya tenaga kerja langsung dan tidak langsung menjadi samgta sulit atau bahkan tidak mungkin untuk dipisahkan. Kedua, tenaga kerja langsung mungkin merupakan bagian yang tidak signifikan dari total biaya produksi, sehingga sulit untuk menjustifikasi identifikasi biaya biaya tenaga kerja langsung sebagai elemen biaya yang terpisah. Dalam situasi dimana satu atau kedua situasi tersebut ada, satu klasifikasi biaya konversi adalah memadai, sehingga bahan baku langsung menjadi satu-satunya elemen biaya yang ditelusuri secara langsung ke produk.

3. Biaya Overhead Pabrik

   Halim (2010:90) mendefinisikan biaya overhead pabrik adalah seluruh biaya produksi yang tidak dapat diklasifikasikan sebagai biaya bahan baku langsung atau biaya tenaga kerja langsung. Biaya overhead pabrik dapat pula didefinisikan sebagai seluruh biaya produksi yang tidak dilacak atau tidak perlu dilacak ke unit produksi secara individual. Jadi, biaya overhead pabrik merupakan seluruh biaya produksi yang dikeluarkan oleh perusahaan yang tidak diklasifikasikan kedalam biaya bahan baku dan biaya tenaga kerja langsung.

   Biaya overhead pabrik dapat digolongkan dengan tiga cara penggolongan yaitu:

   a. Penggolongan menurut sifatnya

      Perusahaan yang produksinya berdasarkan pesanan, biaya overhead pabrik adalah biaya produksi selain biaya bahan baku dan biaya tenga kerja langsung. Penggolongan biaya overhead pabrik menurut sifatnya adalah:

      - Biaya bahan penolong
      - Biaya reparasi dan pemeliharaan
      - Biaya tenaga kerja tidak langsung
      - Biaya yang timbul sebagai penilaian terhadap aktiva tetap
      - Biaya yang timbul sebagai akibat berlalunya waktu
      - Biaya overhead lain yang secara langsung memerlukan pengeluaran uang tunai.

b. Penggolongan menurut prilakunya dalam hubungannya dengan perubahan volume kegiatan
   - Biaya overhead pabrik tetap adalah biaya overhead pabrik yang tidak berubah dalam kisar perubahan volume kegiatan , seperti gaji, tunjangan perusahaan, transport, penyusutan, pajak dan asuransi.
   - Biaya overhead pabrik variabel adalah biaya overhead pabrik yang berubah sebanding dengan perubahan volume kegiatan, seperti bahan pembantu, listrik, air dan gas, bahan bakar, pemeliharaan dan perbaikan mesin.
   - Biaya overhead pabrik semivariabel adalah biaya overhead pabrik yang berubah tidak sebanding dengan perubahan volume kegiatan.

c. Penggolongan menurut hubungannya dengan departemen
   - Biaya overhead pabrik langsung departemen adalah biaya overhead pabrik yang terjadi dalam departemen tertentu dan manfaatnya hanya dinikmati oleh departemen tersebut.
   - Biaya overhead pabrik tidak langsung departemen adalah biaya overhead pabrik yang manfaatnya dinikmati oleh lebih dari satu departemen.

C. Macam-Macam Biaya Produksi

Secara sederhana biaya produksi dapat dicerminkan oleh jumlah uang yang dikel;uarkan untuk mendapatkan sejumlah input. Jenis-jenis biaya produksi menurut Sugianto (2000:313) dapat dibedakan menjadi dua macam, yaitu biaya produksi jangka pendek dan biaya produksi jangka panjang.

1. Biaya produksi jangka pendek
   Biaya produksi jangka pendek diturunkan dari fungsi produksi jangka pendek. Dengan demikian biaya produksi jangka pendek juga dicirikan oleh adanya biaya tetap.
2. Biaya produksi jangka panjang
   Biaya produksi jangka panjang biaya yang dapat disesuaikan untuk tingkat-tingkat produksi tertentu. Sebagai contoh jika capital atau mesin-mesin tidak dapat diubah sesuai dengan perubahan produksi maka dikatakan biaya jangka pendek dan sebaliknya jika mesin dapat disesuaikan untuk tingkat-tingkat produksi tertentu maka dikatakan biaya jangka panjang

D. Aspek Umum Biaya Produksi

Aspek umum biaya produksi dapat digolongkan sebagai berikut:

1. Yang menyangkaut harta fisik
   a. Pemilihan dan penentuan letak bangunan, mesin dan peralatan lainnya
   b. Pemilihan peralatan dan fasilitas.

2. Yang menyengkut perencanaan
   a. Perencanaan dan perancangan produk yang harus dihasilkan
   b. Pengembangan dan pemilihan proses teknis
   c. Pengembangan metode dan standar
   d. Perencanaan dan pengendalian kegiatan produksi.

3. Yang menyangkut produksi
   a. Pengadaan dan pengangkatan karyawan, latihan dan pengendalian tenaga kerja
   b. Pemilihan, penanganan dan penetapan aliran bahan
   c. Pengarahan umum terhadap kegiatan-kegiatan produksi dan koordinasi dengan bagian-bagian lainnya.

2.2. Penjualan

A. Pengertian Penjualan

Mulyadi (2009:202), mendefinisikan penjualan merupakan kegiatan yang dilakukan oleh penjual dalam menjual barang atau jasa dengan harapan akan memperoleh laba dari adanya transaksi-transaksi tersebut dan penjualan dapat diartikan sebagai pengalihan atau pemindahan hak kepemilikan atas barang atau jasa dari pihak penjual ke pembeli."

Kotler (2006:457), mendefinisikan penjualan merupakan sebuah proses dimana kebutuhan pembeli dan kebutuhan penjual dipenuhi, melalui antar pertukaran informasi dan kepentingan."

Berdasarkan definisi diatas disimpulkan bahwa penjualan adalah proses dimana sang penjual memuaskan segala kebutuhan dan keinginan pembeli agar tercapai manfaat baik bagi sang penjual maupun sang pembeli yang berkelanjutan dan yang menguntungkan kedua belah pihak dan diharapkan nantinya didapat insentif jangka pendek untuk meningkatkan pembelian atau penjualan suatu produk atau jasa dimana pembelian diharapkan dilakukan sekarang juga melalui antar pertukaran informasi dan kepentingan.

B. Jenis-Jenis Penjualan

Jenis- jenis penjualan menurut Swasta dan irawan (2008:11) adalah:

1. *Trade Selling*
   Penjualan yang terjadi bilamana produsen dan pedagang besar memperhasilkan

pengecer untuk berusaha memperbaiki distribusi produk mereka.Hal ini melibatkan kegiatan promosi perdagangan, persediaan dan produk yang baru, jadi titik beratnya adalah para penjual melalui penyalur bukan pada penjualan ke pembeli akhir.

2. *Missionary Selling*
   Penjualan berusaha ditingkatkan dengan mendorong pembeli untuk membeli barang dari penyalur perusahaan.
3. *Technical Selling*
   Berusaha meningkatkan penjualan dengan pemberian saran dan nasihat kepada pembeli akhir dari barang dan jasa.
4. *New Business Selling*
   Berusaha membuka transaksi baru dengan membuat calon pembeli menjadi pembeli seperti halnya yang dilakukan perusahaan asuransi.
5. *Responsive Selling*
   Setiap tenaga penjual diharapkan dapat memberikan reaksi terhadap permintaan pembeli melalui *roote driving and retaining*, jenis penjualan ini tidak akan menciptakan penjualan yang besar, namun akan terjalin hubungan pelanggan yang baik yang menjurus pada pembelian ulang.

Midjan (2010:170) menjelaskan bahwa terdapat berbagai macam transaksi penjualan yang dapat diklasifikasikan sebagai berikut:

1. Penjualan secara tunai
   Penjualan yang bersifat cash and carry dimana penjualan setelah terjadi kesepakatan harga antara penjual dengan pembeli, pembeli langsung menyerahkan pembayaran secara tunai dan bisa langsung dimiliki oleh pembeli.
2. Penjualan kredit
   Penjualan *non cash* dengan tenggang waktu rata-rata diatas satu bulan.
3. Penjualan secara tender
   Penjualan yang dilaksanakan melalui prosedur tender untuk memenuhi permintaan pihak pembeli yang membuka tender.
4. Penjualan ekspor
   Penjualan yang dilaksanakan dengan pihak pembeli luar negri yang mengimpor barang yang biasanya menggunakan fasilitas *letter of credit*.
5. Penjualan secara konsinyasi
   Penjualan barang secara titipan kepada pembeli yang juga sebagai penjualan apabila barang tersebut tidak terjual maka akan dikembalikan kepada penjual.
6. Penjualan secara grosir
   Penjualan yang dilakukan tidak langsung kepada pembeli, tetapi melalui pedagang perantara yang menjadi perantara pabrik atau importer dengan pedagang eceran.

C. Faktor Yang Mempengaruhi Penjualan

Swasta dan Irawan (2008:129) mengatakan bahwa dalam kenyataannya sebuah kegiatan penjualan sangat dipengaruhi oleh beberapa faktor baik dari dalam maupun luar, beberapa faktor tersebut antara lain:

1. Kondisi dan kemampuan penjual
   Disini penjual harus dapat meyakinkan pembeli agar berhasil mencapai sasaran penjualan yang diharapkan untuk maksud tertentu, penjual harus memahami beberapa masalah penting yang sangat berkaitan yaitu:
   a. Jenis dan karakteristik barang yang ditawarkan
   b. Harga pokok
   c. Syarat penjualan seperti pembayaran, perantaraan garansi dan sebagainya.

2. Kondisi pasar
   Pasar sebagai kelompok pembeli atau pihak yang menjadi sasaran dalam penjualan dapat juga mempengaruhi penjualan.Beberapa faktor kondisi pasar yang perlu diperhatikan yaitu jenis pasar, kelompok pembeli dan segmennya, daya beli masyarakat, frekuensi pembelian, keinginan dan kebutuhan konsumen.
3. Modal
   Perbedaan ketersediaan modalyang dimiliki juga sangat mempengaruhi penjualan perusahaan. Perusahaan dengan modal besar akan cenderung memiliki penjualan yang lebih tinggi karena terkait dengan biaya produksi yang dibebankan kepada produk semakin kecil, berbeda dengan perusahaan dengan modal kecil yang mau tidak mau seluruh beban produksi yang dimiliki dan mark up keuntungan yang diharapkan secara keseluruhan dibebankan kepada produk.
4. Kondisi organisasi perusahaan
5. Faktor lain (periklanan, peragaan, kampanye dan pemberian hadiah)

D. Langkah-langkah dalam Proses Penjualan

Kotler (2006) menjelaskan langkah-langkah dalamprosespenjualan meliputi:

1. Memilih Prospek dan Menilai
   Langkah pertama dalam proses penjualan adalah memilih prospek (prospecting), yaitu mencari siapa yang dapat masuksebagai pelanggan potensial. Tenaga penjual perlu mengetahui cara menilai prospek (qualify) artinya cara mengenali calon yangbaik dan menyisihkan calon yang jelek. Prospek dapat dinilaidengan meneliti kemampuan

keuangan, volume bisnis, kebutuhan spesial, lokasi dan kemungkinan untuk tumbuh.

2. Prapendekatan.
   Sebelum mengunjungi seorang calon pembeli, tenaga penjual sebaiknya mempelajari sebanyak mungkin mengenai organisasi (apa yang dibutuhkan, siapa yang terlibat dalam pembelian) dan pembelinya (karakteristik dan gaya membeli). Langkah-langkah ini dikenal dengan istilah prapendekatan. Wiraniaga sebaiknya menetapkan tujuan kunjungan yang mungkin untuk menilai calon, mengumpulkan informasi, atau membuat penjualan langsung.
3. Pendekatan
   Dalam langkah ini, wiraniaga sebaiknya mengetahui caranya bertemu dan menyapa pembeli serta menjalin hubunganmenjadi awal yang baik. Langkah ini mencakup penampilan wiraniaga, kata-kata pembukaan, dan tindak lanjutan.
4. Presentasi dan Demonstrasi
   Dalam langkah presentasi dari proses penjualan,tenaga penjual menceritakan "riwayat" produk kepada pembeli, menunjukan bagaimana produk akan menghasilkan dan menghemat uang. Presentasi penjualan dapat diperbaiki dengan alat bantu demonstrasi, seperti buku kecil, pita video, dan sempel produk.
5. Mengatasi Keberatan
   Pelanggan hampir selalu mempunyai keberatan selama presentasi atau ketika diminta untuk memesan. Dalam mengatasi keberatan wiraniaga harus menggunakan pendekatan positif, menggali keberatan tersembunyi, meminta pembeli untuk menjelaskan keberatan, menggunakan keberatan sebagai peluang untuk memberikan informasi lebih banyak dan mengubah keberatan menjadi alasan untuk membeli.
6. Menutup
   Menutup merupakan langkah dalam proses penjualan ketika wiraniaga meminta pelanggan untuk memesan. Tenaga penjual harus mengetahui cara mengenali tanda-tanda penutupan daripembeli termasuk gerakan fisik, komentar dan pertanyaan.
7. Tindak Lanjut
   Merupakan langkah terakhir dalam proses penjualan ketika wiraniaga melakukan tindak lanjut setelah penjualanuntuk memastikan kepuasan pelanggan dan bisnis berulang.

III. METODE PENELITIAN

Didalam penelitian ini menggunakan teknik analisa kuantitatif dimana yang menjadi variabel x adalah biaya produksi sedangkan variabel y adalah hasil penjualan. Data berupa data time series yaitu data biaya produksi dan hasil penjualan dari bulan Januari 2013 sampai dengan Desember 2015. Untuk memudahkan dalam pengolahan data, peneliti memperkecil data dengan meloankan data terlebih dahulu. Penulis menggunakan analisa korelasi, regresi serta determinasi, dan data diolah menggunakan SPSS versi 21.

IV. HASIL DAN PEMBAHASAN

4.1. Data

Berikut ini adalah data biaya produksi dan penjualan selama Januari s/d Desember 2015 yang telah disederhanakan (Ln)

Tabel 1 : Data biaya produksi dan hasil penjualan Januari 2013 s/d Desember 2015

	Biaya Produksi			Hasil Penjualan		
Bulan	**2013**	**2014**	**2015**	**2013**	**2014**	**2015**
Januari	21,92	22,44	23,85	22,86	23,67	25,40
Februari	21,91	22,44	23,85	22,85	23,67	25,39
Maret	21,90	22,44	23,85	22,83	23,67	25,39
April	21,90	22,41	23,85	22,83	23,64	25,39
Mei	21,90	22,40	23,83	22,83	23,64	25,39
Juni	21,90	22,38	23,83	22,84	23,63	25,39
Juli	21,99	22,41	23,83	22,92	23,64	25,39
Agustus	21,98	22,39	23,84	22,91	23,63	25,39
September	21,98	22,38	23,86	22,91	23,64	25,41
Oktober	21,97	22,26	23,86	22,90	23,45	25,41
November	21,97	22,31	23,86	22,90	23,52	25,41
Desember	21,98	22,27	23,87	22,90	23,40	25,41

Sumber: Hasil Pengolahan Data (2016)

Berdasarkan tabel 1, terlihat bahwabertambahnya biaya produksi semakin meningkat pula hasil penjualan. Dikarenakan bertambahnya jumlah barang yang diproduksi pada PT. Shindengen Indonesia.

4.2. Analisis Biaya Produksi Terhadap Penjualan

A. Uji Koefisien Korelasi

Berdasarkan data pada tabel 1. maka hasil pengolahan untuk koefisien korelasi, sebagai berikut:

Tabel 2. Uji Koefisien Korelasi

Correlations			
		Biaya Produksi	Hasil Penjualan
Biaya Produksi	*Pearson Correlation*	1	.998**
	Sig. (2-tailed)		.000
	N	36	36
Hasil Penjualan	*Pearson Correlation*	.998**	1
	Sig. (2-tailed)	.000	
	N	36	36
***. Correlation is significant at the 0.01 level (2-tailed).*			

Sumber: Hasil Pengolahan Data (2016)

Berdasarkan tabel 2. Hasil pengolahan SPSS di peroleh nilai signifikan sebesar 0,000 dan nilai pearson correlation sebesar 0,998 menunjukkanadanya hubungan sangat kuat antara biaya produksi terhadap hasil penjualan.

B. Uji Koefisien Determinasi

Tabel 3 ; Koefisien Regresi

Coefficients[a]						
Model		*Unstandardized Coefficients*		*Standardized Coefficients*	*t*	*Sig.*
		B	Std. Error	Beta		
1	(*Constant*)	-5.485	.335		-16.373	.000
	Biaya Produksi	1.296	.015	.998	87.945	.000

a. *Dependent Variable*: Hasil Penjualan

Sumber: Hasil Pengolahan Data (2016)

Berdasarkan tabel 3, Model yang terbentuk dalam persamaansederhana pengaruh biaya Produksi terhadap Penjualan adalah:

Y = -5.485 + 1.296 X

Persamaan tersebut mengandung arti Konstanta -5.485 jika biaya produksi (X) nilainya 0, maka hasil penjualan (Y) nilainya negatif yaitu sebesar -5.485.Koefisien regresi variabel X sebesar1.296, artinya jika biaya produksi mengalami kenaikan1, maka hasil penjualan (Y) akan mengalami peningkatan sebesar 1.296. Koefisien bernilai positif artinya terjadi hubungan positif antara biaya produksi dengan hasil penjualan, semakin naik biaya produksi maka semakin meningkatkan hasil penjualan.

Tabel 4 : Koefisien Determinasi

Model *Summary*[b]				
Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	.998[a]	.996	.995	.07229
a. *Predictors: (Constant),* Biaya Produksi				
b. *Dependent Variable:* Hasil Penjualan				

Sumber: Hasil Pengolahan Data (2016)

Berdasarkan tabel 4, diperoleh nilai *R Square* sebesar 0,996, yang menunjukkan bahwa hasil penjualan pada PT Shindengen Indonesia dipengaruhi oleh biaya produksi sebesar 99,6 % , sisanya yaitu 0,4 % dipengaruhi variabel lain yang tidak dianalisis dalam penelitian ini.

C. Uji Hipotesa

Tabel 5. Uji t

Coefficients[a]						
Model		*Unstandardized Coefficients*		*Standardized Coefficients*	*t*	*Sig.*
		B	*Std. Error*	*Beta*		
1	(Constant)	-5.485	.335		-16.373	.000
	Biaya Produksi	1.296	.015	.998	87.945	.000

a. Dependent Variable: Hasil Penjualan

Sumber: Hasil Pengolahan Data (2016)

Berdasarkan tabel 5. diperoleh hasil :

1. Tingkat signifikansi menggunakan £= 5%. Berdasarkan tabel III.8 diperoleh t hitung sebesar 87.945.
2. Menentukan t tabel. Tabel distribusi t dicari pada £ = 5% : 2 = 2,5% (uji 2 sisi) dengan derajat kebebasan (df) n-k-1 atau 36-1-1 (n adalah jumlah kasus dan k adalah jumlah variabel independen). Dengan pengujian 2 sisi (signifikansi = 0,025) hasil diperoleh untuk t tabel sebesar 2,032 [=tinv(0,05;34)]
   Ho : Besarnya biaya produksi tidak berpengaruh terhadap hasil penjualan
   Ha : Adanya pengaruh antara besarnya biaya produksi terhadap hasil penjualan
   Kriteria :
   - Jika t hitung > t tabel maka Ho ditolak dan Ha diterima.
   - Jika t hitung < t tabel maka Ho diterima dan Ha ditolak.

   Oleh karena t hitung > dari t tabel (87.945> 2.032) maka Ho ditolak, artinya bahwa ada pengaruh secara signifikan antara biaya produksi dengan hasil penjualan.

V. PENUTUP

5.1. Kesimpulan

Berdasarkan hasil pegolahan data dan analisis terhadap variabel-variabel yang diamati dapat disimpulkan sebagai berikut :

1. Hasil pengolahan data menunjukkan bahwa terdapat hubungan/korelasi yang sangat kuat antara biaya produksi terhadap penjualan sebesar 0,998
2. Persamaan regresi antara biaya produksi dan penjualan Y = -5.485 + 1.296 X, Persamaan tersebut mengandung arti Konstanta -5.485 jika biaya produksi (X) nilainya 0, maka hasil penjualan (Y) nilainya negatif yaitu sebesar -5.485.Koefisien regresi variabel X sebesar1.296, artinya jika biaya produksi mengalami kenaikan Rp 1, maka hasil penjualan (Y) akan mengalami peningkatan sebesar Rp 1.296. Koefisien bernilai positif artinya terjadi hubungan positif antara biaya produksi dengan hasil penjualan, semakin naik biaya produksi maka semakin meningkatkan hasil penjualan.
3. Hasil penelitian menunjukkan *R Square* sebesar 0,996, yang menunjukkan bahwa hasil penjualan pada PT Shindengen Indonesia dipengaruhi oleh biaya produksi sebesar 99,6 % , sisanya yaitu 0,4 % dipengaruhi variabel lain yang tidak dianalisis dalam penelitian ini.
4. Berdasarkan uji hipotesa dengan uji t diperoleh t hitung > dari t tabel (87.945> 2.032) maka Ho ditolak, artinya bahwa ada pengaruh secara signifikan antara biaya produksi dengan hasil penjualan.

5.2. Saran

Pertambahan biaya produksi pada PT. Shindengen Indonesia disebabkan oleh bertambahnya jumlah produk yang diproduksi disamping itu disebabkan juga karena adanya failure cost. Untuk menekan bertambahnya biaya produksi akibat dari failure cost sebaiknya PT Shindengen Indonesia memberikan pengarahan kepada pegawai agar selalu konsentrasi dalam bekerja dan selalu mematuhi *work intruction* atau intruksi kerja sehingga dapat menekan biaya produksi dan laba yang diperoleh bisa bertambah.

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ANALISIS PERBANDINGAN KINERJA KEUANGAN PERBANKAN BUMN PERIODE 2010 – 2015

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ABSTRACT

BUMN bank is a groups the most influential banks in the Indonesian banking industry. fourth the BUMN Bank namely BRI, Mandiri, BNI, and BTN successively is the largest bank number one, two, four, and Six of a total of 118 banks in Indonesia. The purpose of this study was to analyze the comparisons financial performance BUMN banking consisting of PT Bank Rakyat Indonesia Tbk, PT Bank Mandiri Tbk, PT Bank Negara Indonesia Tbk and PT Bank Tabungan Negara Tbk period 2010 - 2015 using financial ratios. This research is using secondary data, namely in the form of annual financial statements of companies banking BUMN listed on the Indonesia Stock Exchange period 2010 - 2015. Based on the financial performance analyzed include four ratios as measured, this is EPS, PER, PBV and DER, seen that the financial performance PT Bank Rakyat Indonesia Tbk, PT Bank Mandiri Tbk, PT Bank Negara Indonesia Tbk are very dominating and better when compared with PT Bank Tabungan Negara Tbk Testing were performed using One-Way ANOVA test in partially seen that there are differences in the average financial performance of the four companies based EPS, PBV and DER. Whereas in simultaneous, Statistical test results in this study shows the difference in financial performance between the four companies. This result indicates that the portfolio formation that consists of four types of shares will delivers optimal yield considering the fourth these stocks have a different characteristic views of its financial performance.

Keywords : Financial Performance, EPS, PER, PBV and DER.

I. PENDAHULUAN

Institusi perbankan merupakan institusi yang sangat menarik untuk diamati. Keberadaan institusi perbankan sebagai tempat untuk menghimpun dana dan mengalokasikan dana menjadi daya tarik tertentu karena hanya perbankan yang memiliki fungsi itu. Di samping itu, kinerja institusi perbankan sangat dapat dipersandingkan dengan kinerjasuatu pemerintah-an karena institusi ini melaksanakan fungsi sebagai fasilitator keuangan.(Sipahutar,2007:11).

Bank BUMN merupakan kelompok bank paling berpengaruh dalam industri perbankan Indonesia. Keempat bank BUMN yakni Bank BRI, Mandiri, BNI, dan BTN berturut – turut merupakan bank terbesar nomor satu, dua, empat, dan enam dari total 118 bank di Indonesia. (Kompas.com, 2016)

Tabel 1 : Perkembangan Laba/Rugi Bersih Bank Umum (Milliar Rupiah)

	Oktober 2014	Oktober 2015	Pertumbuhan
Bank Persero	Rp 44,46	Rp 44,65	0,42%
Bank BUMN Devisa	Rp 27,81	Rp 25,27	-9,13%
Bank BUMN Non Devisa	Rp 1,99	Rp 1,84	-7,53%
BPD	Rp 8,82	Rp 8,11	-8,04%
Bank Campuran	Rp 3,56	Rp 1,60	-55,05%
Bank Asing	Rp 7,47	Rp 5,14	-31,19%

Sumber : Hasil Penelitian (2015)

Berdasarkan tabel di atas terlihat jelas bahwa Bank Persero merupakan perbankan yang memiliki pertumbuhan yang sangat baik, namun untuk menilai sebuahperbankan baik atau tidak bukan hanya dilihat dari pertumbuhan laba/ruginya, salah satu alat yang dapat digunakan untuk menilai perbankan adalah rasio keuangan.

II. TINJAUAN PUSTAKA

2.1. Rasio Keuangan

Arifin (2007:32) mendefinisikan rasio keuangan sebagai alat analisis yang dinyatakan dalam artian relatif maupun absolut untuk menjelaskan hubungan tertentu antara elemen yang satu dengan elemen yang lain dalam suatu laporan keuangan.Rasio – rasio keuangan yang buruk pada umumnya memiliki *financing cost* yang tinggi. Sedangkan menurut Tambunan (2007:128) rasio – rasio keuangan yang baik umumnya akan membangkitkan gairah para investor untuk menanamkan modalnya.

2.2. Analisis Rasio

Wahyudiono (2014:11) mengatakan bahwa analisis digunakan untuk mengevaluasi kinerja perusahaan dengan membandingkan ke tahun - tahun sebelumnya. Tujuan analisis laporan keuangan sendiri pada hakikatnya adalah untuk membantu pemakai dalam memperkirakan masa depan perusahaan dengan cara membandingkan, mengevaluasi, dan menganalisis kecenderungan dari aspek keuangan perusahaan.

A. Earning Per Share(EPS)

Salim (2010:83) mendefinisikan *EPS* adalah laba yang diperolah oleh setiap satu lembar saham. Sebuah perusahaan yang memiliki kinerja yang baik tentunya juga memiliki kemampuan untuk mendapatkan laba dari kinerjanya.Biasanya, laba ini dinyatakan dalam bentuk angka. Semakin tinggi nilai *EPS* sebuah perusahaan, perusahaan tersebut akan mendapat penilaian semakin tinggi dalam hal kemampuan menciptakan laba. Perhitungan *EPS* dapat dirumuskan sebagai berikut :

$$EPS = \frac{Net\ Eaning}{Common\ Stock\ Outstanding}$$

B. *Price Earning Ratio* (*PER*)

Wahyudiono (2014:86) mengatakan bahwa rasio ini membandingkan antara harga saham yang diperoleh dari pasar modal dan laba per saham yang diperoleh pemilik perusahaan yang disajikan dalam laporan keuangan.Perhitungan PER dapat dirumuskan sebagai berikut :

$$PER = \frac{\text{Harga Pasar Saham}}{Earning\ Per\ Share}$$

C. Price to Book Value(PBV)

Haryadi (2013:87) mengatakan bahwa*PBV* merupakan rasio untuk membandingkan harga wajar saham dengan harga di pasar. Semakin rendah *PBV* berarti harga saham tersebut dianggap murah.Dalam mayoritas saham di BEI (Bursa Efek Indonesia), jarang ditemukan emiten *PBV* rendah.Sebagai catatan, *PBV* hanya membanding-kan harga saham dengan nilai bukunya, bukan kemampuan perusahaan untuk menghasilkan laba.Perhitungan *PBV* dapat dirumuskan sebagai berikut :

$$PBV = \frac{\text{Harga Pasar Saham}}{\text{Nilai Buku Saham}}$$

D. *Debt to Equity Ratio* (*DER*)

Jusuf (2007:55) menjelaskan bahwa rasio yang paling banyak dipergunakan untuk menghitung *leverage* perusahaan adalah *DER,* yaitu perbandingan antara Total Kewajiban (Total Utang) dengan Total Modal Sendiri (*Equity*). Rasio ini menunjukan sejauh mana modal sendiri menjamin seluruh utang. Rasio ini juga dapat dibaca sebagai perbandingan antara dana pihak luar dengan dana pihak pemilik perusahaan yang dimasukan kedalam perusahaan.Perhitungan *DER* dapat dirumuskan sebagai berikut :

$$DER = \frac{\text{Total Utang}}{\text{Total Modal Sendiri}} \text{x}100$$

III. METODE PENELITIAN

Penelitian ini menggunakan data sekunder, yaitu berupa laporan keuangan tahunan perusahaan perbankan BUMN yang terdaftar di Bursa Efek Indonesia periode 2010 – 2015, dan menerbitkan ringkasanlaporan keuangan seperti *EPS, PER, PBV, DER*.

3.1. Hipotesis

Adanya perbedaan kinerja keuangan yang diukur oleh *earning per share* (EPS), *price earning ratio* (PER), *price to book value* (PBV) dan *debt to equity ratio* (DER) antara PT. Bank Mandiri Tbk., PT. Bank Rakyat Indonesia Tbk., PT. Bank Negara Indonesia Tbk. dan PT. Bank Tabungan Negara Tbk. periode 2010 – 2015 baik secara parsial maupun simultan.

IV. HASIL DAN PEMBAHASAN

4.1. Deskripsi Kinerja Keuangan Perbankan BUMN Berdasarkan Rasio *Earning Per Share (EPS)*

Semakin tinggi nilai *EPS* sebuah perusahaan, perusahaan tersebut akan mendapat penilaian semakin tinggi dalam hal kemampuan menciptakan laba. (Salim,2010:83).

Perkembangan *EPS* di perusahaan perbankan BUMN disajikan pada tabel 2di bawah ini.

Tabel 2 :Perkembangan (EPS) Perbankan BUMNPeriode 2010 – 2015

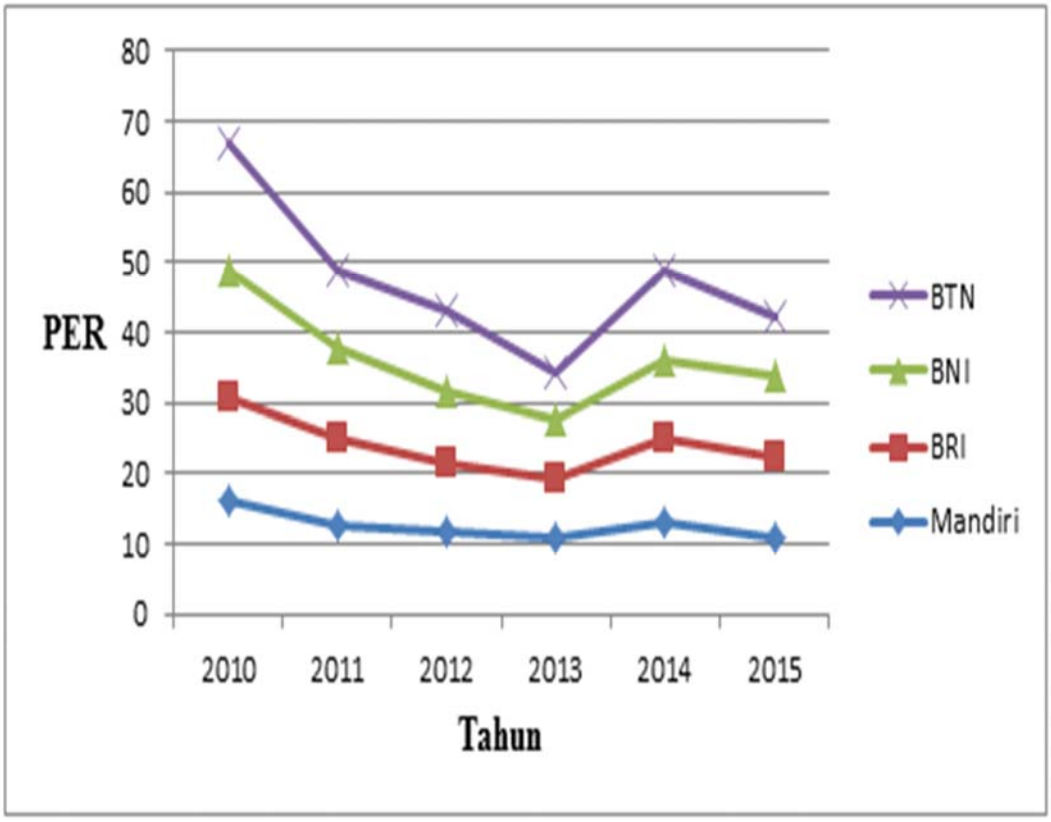
Tahun	Mandiri	Perkembangan	BRI	Perkembangan
	(%)	(%)	(%)	(%)
2010	406	0	719	0
2011	558	37.44	550	-23.50
2012	675	20.97	737	34.00
2013	732	8.44	835	13.30
2014	826	12.84	981	17.49
2015	842	1.94	1,005	2.45
Rata - Rata	673	13.60	805	7.29

Tahun	BNI	Perkembangan	BTN	Perkembangan
	(%)	(%)	(%)	(%)
2010	211	0	91	0
2011	293	38.86	109	19.78
2012	357	21.84	130	19.27
2013	467	30.81	133	2.31
2014	544	16.49	95	-28.57
2015	433	-20.40	156	64.21
Rata - Rata	384	14.60	119	12.83

Sumber : Hasil Pengolahan Data (2015)

Berdasarkan Tabel 2, mengenai *EPS* dari 4 perusahaan perbankan BUMN terlihat bahwa secara rata – rata*EPS* yang dapat di bentuk oleh PT. Bank Mandiri Tbk, PT. Bank Rakyat Indonesia Tbk, PT. Bank Negara Indonesia Tbk dan PT. Bank Tabungan Negara Tbk. Setiap tahunnya adalah sebesar 6,73%, 8,05%, 3,84% dan 1,19%, dengan kecenderungan yang setiap tahunnya berbeda. PT. Bank Mandiri Tbk. mengalami kenaikan rata – rata sebesar 13,60%, PT. Bank Rakyat Indonesia Tbk. mengalami kenaikan rata – rata sebesar 7,29%, PT. Bank Negara Indonesia Tbk. mengalami kenaikan rata – rata sebesar 14,60% dan PT. Bank Tabungan Negara Tbk. mengalami kenaikan rata – rata sebesar 12,83%. Apabila keempat rasio ini dibandingkan dengan rata – rata sektor industri perbankan yaitu sebesar 1,33%, maka terlihat bahwa perusahaan perbankanyang memiliki *EPS* lebih besar dari rata – rata sektor industri perbankan ditunjukan oleh 3 bank, dimana rata – rata *EPS* tertinggi (maksimum) ditunjukan oleh PT. Bank Rakyat Indonesia Tbk. sebesar 8,05%. Hal ini menunjukan bahwa ketiga perbankan tersebut memiliki kemampuan memperoleh laba bersih per lembar saham lebih tinggi dibandingkan perusahaan perbankan lainnya.Sedangkan perusahaan perbankan yang memiliki *EPS* lebih kecil dari rata – rata sektor industri perbankan ditunjukan oleh PT. Bank Tabungan Negara Tbk. sebesar 1,19%. Hal ini menunjukan bahwa PT. Bank Tabungan Negara Tbk. memiliki perolehan laba bersih per saham di bawah rata – rata perusahaan perbankan lainnya.

Berikut ini disampaikan grafik perkembangan *EPS* Perbankan BUMN Periode 2010 – 2015.



Gambar 1: Grafik Perkembangan PER Perbankan BUMN Periode 2010 – 2015
Sumber : Hasil Pengolahan Data (2015)

Berdasarkangambar1. terlihat bahwa *PER* PT. Bank Mandiri Tbk. berada di bawah dari 3 perusahaan perbankan lainnya, yang menunjukan bahwa saham tersebut relatif lebih murah dan menarik untuk dijadikan investasi dibandingkan dengan PT. Bank Rakyat Indonesia Tbk., PT. Bank Negara Indonesia Tbk., dan PT. Bank Tabungan Negara Tbk.

4.2. Deskripsi Kinerja Keuangan Perbankan BUMN Berdasarkan Rasio *Price to Book Value* (*PBV*)

Haryadi (2013:87) menerangkan bahwarasio inidigunakan untuk membandingkan harga wajar saham dengan harga di pasar. Semakin rendah *PBV* berarti harga saham tersebut dianggap murah.Perkembangan *PBV* di perusahaan perbankan BUMN disajikan pada tabel 3 di bawah ini.

Tabel 3 : Perkembangan *Price to Book Value* (*PBV*) BUMN Periode 2010 – 2015

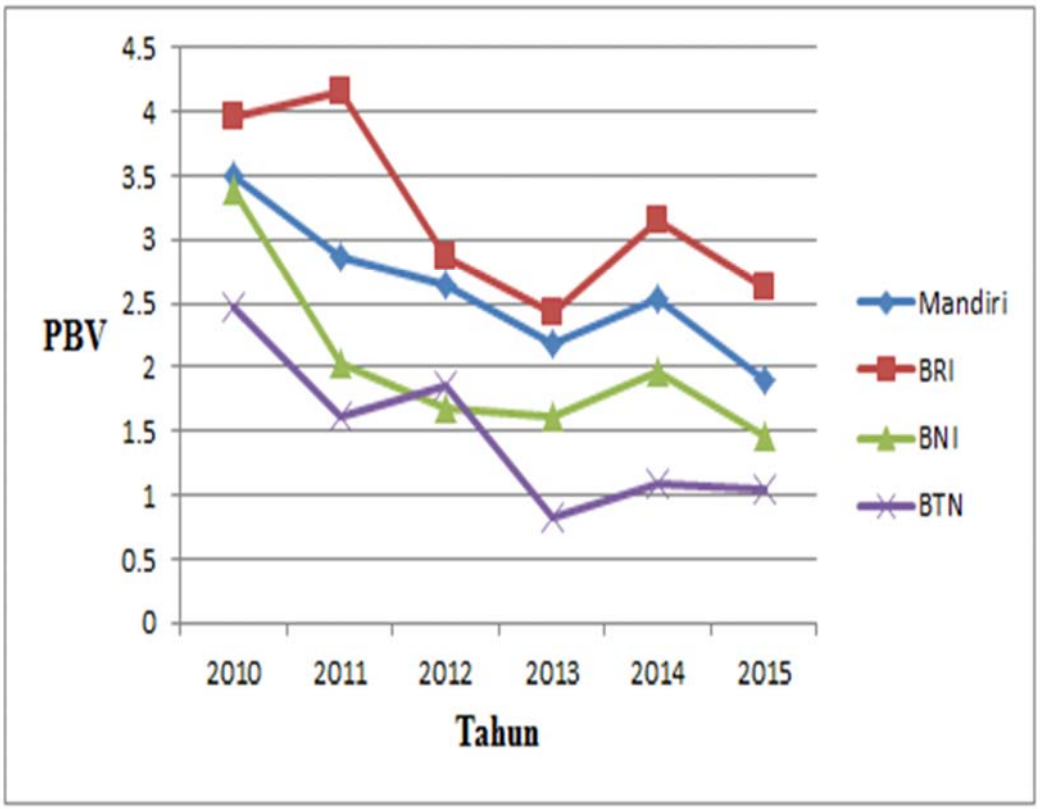
Tahun	Mandiri	Perkembangan	BRI	Perkembangan
	(%)	(%)	(%)	(%)
2010	3.5	0	3.96	0
2011	2.86	-18.29	4.15	4.80
2012	2.65	-7.34	2.86	-31.08
2013	2.19	-17.36	2.43	-15.03
2014	2.54	15.98	3.14	29.22
2015	1.91	-24.80	2.62	-16.56
Rata - Rata	2.61	-8.63	3.19	-4.78

Tahun	BNI	Perkembangan	BTN	Perkembangan
	(%)	(%)	(%)	(%)
2010	3.39	0	2.46	0
2011	2.03	-40.12	1.62	-34.15
2012	1.67	-17.73	1.85	14.20
2013	1.61	-3.59	0.83	-55.14
2014	1.97	22.36	1.08	30.12
2015	1.46	-25.89	1.04	-3.70
Rata - Rata	2.02	-10.83	1.48	-8.11

Sumber : Hasil Pengolahan Data (2015)

Berdasarkan tabel 3. mengenai *price to book value* (*PBV*) dari 4 perusahaan perbankan BUMN terlihat bahwa secara rata – rata *PBV*yang dapat dibentuk oleh PT. Bank Mandiri Tbk, PT. Bank Rakyat Indonesia Tbk, PT. Bank Negara Indonesia Tbk dan PT. Bank Tabungan Negara Tbk, setiap tahunnya adalah sebesar 2,61 kali, 3,19 kali, 2,02 kali dan 1,48 kali, dengan kecenderungan setiap tahunnya mengalami penurunan rata – rata sebesar 8,63%, 4,78%, 10,83% dan 8,11%.Apabila keempat nilai rasio tersebut dibandingkan dengan rata – rata sektor industri perbankan yaitu sebesar 1,89 kali, maka terlihat bahwa perusahaan perbankan yang memiliki *PBV* lebih besar dari rata – rata industri perbankan ditunjukanoleh 3 bank dimana rata – rata *PBV* tertinggi (maksimum) ditunjukan oleh PT. Bank Rakyat Indonesia Tbk. sebesar 3,19 kali. Sedangkan perusahaan perbankan yang memiliki *PBV* lebih kecil dari rata – rata sektor industri perbankan ditunjukan oleh PT. Bank Tabungan Negara Tbk. sebesar 1,48 kali. Hasil ini menunjukan bahwa respon pasar terhadap perkembangan PT. Bank Mandiri Tbk., PT. Bank Rakyat Indonesia Tbk. dan PT. Bank Negara Indonesia Tbk.sangat tinggi apabila dibandingkan dengan PT. Bank Tabungan Negara Tbk.

Berikut ini disampaikan grafik perkembangan *PBV* Perbankan BUMN Periode 2010 – 2015



Gambar 2 : Grafik Perkembangan *PBV*Perbankan BUMN Periode 2010 – 2015
Sumber : Hasil Pengolahan Data (2015)

Berdasarkan gambar3,. terlihat bahwa *PBV* PT. Bank Mandiri Tbk, PT. Bank Rakyat Indonesia Tbk dan PT. Bank Negara Indonesia Tbk. jauh di atas PT. Bank Tabungan Negara Tbk. Hasil ini menunjukan bahwa respon pasar terhadap PT. Bank Mandiri Tbk, PT. Bank Rakyat Indonesia Tbk. dan PT. Bank Negara Indonesia Tbk. jauh lebih baik dibandingkan dengan PT. Bank Tabungan Negara Tbk.

4.3. Deskripsi Kinerja Keuangan Perbankan BUMN Berdasarkan Rasio *Debt to Equity Ratio* (*DER*)

Rasio ini menunjukan sejauh mana modal sendiri menjamin seluruh utang. Rasio ini juga dapat dibaca sebagai perbandingan antara dana pihak luar dengan dana pihak pemilik perusahaan yang dimasukan kedalam perusahaan (Jusuf, 2007:55).

Perkembangan *DER* perbankan BUMN di sajikan pada tabel 4 di bawah ini.

Tabel 4 : Perkembangan *Debt to Equity Ratio* (*DER*) Perbankan BUMN Periode 2010 – 2015

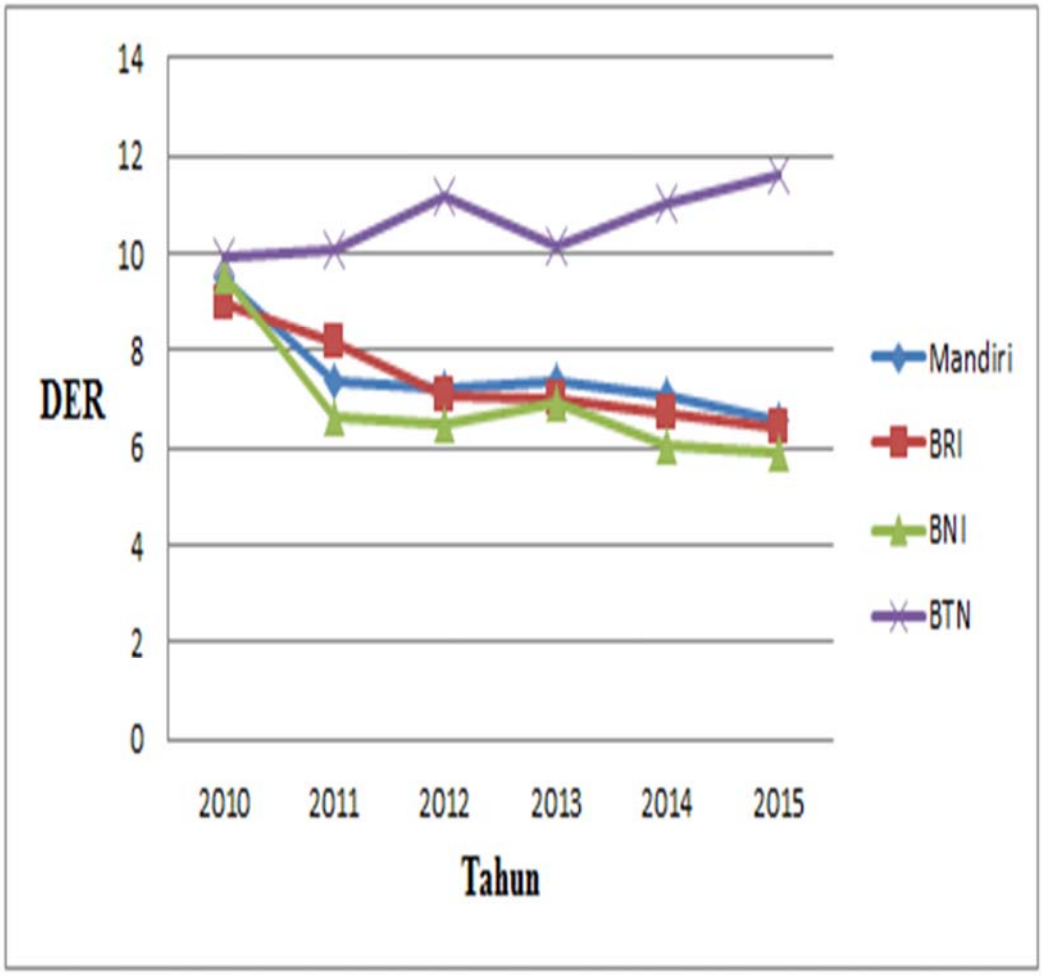
Tahun	Mandiri	Perkembangan	BRI	Perkembangan
	(%)	(%)	(%)	(%)
2010	3.5	0	3.96	0
2011	2.86	-18.29	4.15	4.80
2012	2.65	-7.34	2.86	-31.08
2013	2.19	-17.36	2.43	-15.03
2014	2.54	15.98	3.14	29.22
2015	1.91	-24.80	2.62	-16.56
Rata - Rata	2.61	-8.63	3.19	-4.78

Tahun	BNI	Perkembangan	BTN	Perkembangan
	(%)	(%)	(%)	(%)
2010	3.39	0	2.46	0
2011	2.03	-40.12	1.62	-34.15
2012	1.67	-17.73	1.85	14.20
2013	1.61	-3.59	0.83	-55.14
2014	1.97	22.36	1.08	30.12
2015	1.46	-25.89	1.04	-3.70
Rata - Rata	2.02	-10.83	1.48	-8.11

Sumber : Hasil Pengolahan Data (2015)

Berdasarkan tabel 4 mengenai *debt to equity ratio*(*DER*) dari 4 perusahaan perbankan BUMN terlihat bahwa secara rata – rata *DER* yang dapat dibentuk oleh PT. Bank Mandiri Tbk., PT. Bank Rakyat Indonesia Tbk, PT. Bank Negara Indonesia Tbk dan PT. Bank Tabungan Negara Tbk, setiap tahunnya adalah sebesar 7,51%, 7,39%, 6,39% dan 10,67%, dengan kecenderungan setiap tahunnya yang berbeda.Apabila PT. Bank Mandiri Tbk. mengalami penurunan rata – rata sebesar 5,64%, PT. Bank Rakyat Indonesia mengalami penurunan rata – rata sebesar 5,21% dan PT. Bank Negara Indonesia mengalami penurunan sebesar 6,86%, sedangkan PT. Bank Tabungan Negara Tbk. mengalami kenaikan rata – rata sebesar 2,83%. Apabila keempat rasio *DER* ini dibandingkan dengan rata – rata sektorindustri perbankan yaitu sebesar 8,08%, maka terlihat bahwa perusahaan perbankan yang memiliki DER lebih besar dari rata – rata sektor industri perbankan ditunjukan oleh PT. Bank Tabungan Negara Tbk. sebesar 10,67%. Sedangkan perusahaan perbankan yang memiliki *DER* lebih kecil dari rata – rata sektor industri perbankan ditunjukan oleh 3 bank, dimana rata – rata *DER* terendah (*minimum*) ditunjukan oleh PT. Bank Negara Indonesia Tbk. sebesar 6,93%.Hasil ini menunjukan bahwa kepemilikan utang PT. Bank Tabungan Negara Tbk. lebih mendominasi dibandingkan posisi utang PT. Bank Mandiri Tbk., PT. Bank Rakyat Indonesia Tbk. dan PT. Bank Negara Indonesia Tbk.

Berikut ini disampaikan grafik perkembangan *DER* Perbankan BUMN Periode 2010 – 2015.



Gambar 3 : Grafik Perkembangan *DER* Perbankan BUMN Periode 2010 – 2015
Sumber : Hasil Pengolahan Data (2015)

Berdasarkan gambar 3,terlihat bahwa *DER* PT. Bank Tabungan Negara Tbk. selalu berada di atas 3 perusahaan perbankan lainnya, yang menunjukan bahwa arti kepemilikan utang PT. Bank Tabungan Negara Tbk. lebih dominan dibandingkan PT. Bank Mandiri Tbk., PT. Bank Rakyat Indonesia Tbk. dan PT. Bank Negara Indonesia Tbk.

4.4. Kinerja Keuangan Secara Keseluruhan

Keseluruhan kinerja keuangan yang dianalisis meliputi empat rasio yang diukur, yaitu

Sehingga dapat disimpulkanbahwa kinerja keuangan PT. Bank Mandiri Tbk, PT. Bank Rakyat Indonesia Tbk dan PT. Bank Negara dengan PT. Bank Tabungan Negara Tbk.

4.5. Uji One-Way *ANOVA*

Pengujian tahap selanjutnya adalah dengan menggunakan *One-Way ANOVA*.Melalui uji *One-Way ANOVA* ini dapat diketahui apakah *EPS, PER, PBV* dan *DER* PT. Bank Mandiri Tbk, PT. Bank Rakyat Indonesia Tbk, PT. Bank Negara Indonesia Tbk. dan PT. Bank Tabungan Negara Tbk. berbeda satu sama lain atau tidak. Uji *One-Way ANOVA* dalam penelitian ini dilakukan untuk menguji variabel baik secara parsial maupun simultan.

EPS, PER, PBV dan *DER* terlihat bahwa kinerja keuangan PT. Bank Rakyat Indonesia Tbk. lebih unggul dalam perolehan laba bersih per lembar saham (*EPS*), PT. Bank Mandiri Tbk. memiliki nilai saham yang lebih rendah (*PER*), PT. Bank Mandiri Tbk, PT. Bank Rakyat Indonesia Tbk dan PT. Bank Negara Indonesia Tbk. menunjukan respon pasar yang baik (*PBV*)dan PT. Bank Tabungan Negara Tbk. mendominasi kepemilikan utang (*DER*).

4.6. Pengujian Variabel Secara Parsial

Berdasarkan tabel 4berikut dapat dilihat hasil uji beda secara parsial berdasarkan uji *One-Way ANOVA* untuk setiap variabel yang digunakan.

Tabel 5 : Uji *One-Way ANOVA* Secara Parsial

ANOVA						
		Sum of Squares	*Df*	*Mean Square*	*F*	*Sig.*
EPS	*Between Groups*	1687160.792	3	562386.931	30.743	.000
	Within Groups	365863.167	20	18293.158		
	Total	2053023.958	23			
PER	*Between Groups*	5.000	3	1.667	.185	.905
	Within Groups	180.333	20	9.017		
	Total	185.333	23			
PBV	*Between Groups*	10.458	3	3.486	7.606	.001
	Within Groups	9.167	20	.458		
	Total	19.625	23			
DER	*Between Groups*	51.792	3	17.264	15.122	.000
	Within Groups	22.833	20	1.142		
	Total	74.625	23			

Sumber : Hasil Pengolahan Data (2016)

Berdasarkan tabel 5, diketahui bahwa kecuali *PER*, rasio lainnya yaitu *EPS, PBV* dan *DER* memiliki F hitung > F tabel untuk signifikansi α = 0,05, sehingga dapat disimpulkan bahwa H_0 ditolak dan meng– indikasikanbahwa terdapat perbedaan kinerja yang diproksi oleh rasio tersebut di atas antara PT. Bank Mandiri Tbk, PT.Bank Rakyat Indonesia Tbk, PT. Bank Negara Indonesia Tbk dan PT. Bank Tabungan Negara Tbk.

4.7. Pengujian Variabel Secara Simultan

Tabel 6 berikut ini menyajikan hasil uji *One-Way ANOVA* secara simultan dari semua variabel yangdigunakan.

Tabel 6 : Uji *One-Way ANOVA* Secara Simultan

ANOVA					
	Sum of Squares	*Df*	*Mean Square*	*F*	*Sig.*
Between Groups	4283535.198	3	1427845.066	63.976	.000
Within Groups	2053303.542	92	22318.517		
Total	6336838.740	95			

Sumber : Hasil Penelitian, 2016 (data diolah)

Berdasarkan hasil uji pada tabel 6, dapat dilihat bahwa nilai uji F secara simultan terhadap penelitian ini adalah sebesar 63,976 dengan signifikansi 0,000 (p<0,05). Dengan kata lain, H_0 penelitian ini ditolak. Hasil ini mengindikasikan bahwa secara simultan terdapat perbedaan kinerja keuangan antara PT. Bank Mandiri Tbk, PT. Bank Rakyat Indonesia Tbk, PT. Bank Negara Indonesia Tbk dan PT. Bank Tabungan Negara Tbk. selama periode 2010 – 2015. Dengan karakteristik yang sama dari kinerja keuangannya, maka kedua saham perusahaan tersebut akan optimal apabila akan dibentuk portofolio dalam strategi investasinya.

V. PENUTUP

Berdasarkan hasil analisis perbandingan kinerja keuangan, maka dapat disimpulkan sebagai berikut :

1. Secara menyeluruh kinerja keuangan PT. Bank Mandiri Tbk, PT. Bank Rakyat Indonesia Tbk, dan PT. Bank Negara Indonesia Tbk, yang diproksi oleh 4 rasio, yaitu *EPS, PER, PBV* dan *DER* sangat mendominasi dan lebih baik apabila dibandingkan dengan PT. Bank Tabungan Negara Tbk.
2. Pengujian variabel secara parsial menunjukan adanya perbedaan kinerja keuangan antara PT. Bank Mandiri Tbk, PT. Bank Rakyat Indonesia Tbk, PT. Bank Negara Indonesia Tbk dan PT. Bank Tabungan Negara Tbk, selama periode 2010 – 2015. Perbedaan ini memiliki arti bahwa para investor yang mempertimbangkan rasio keuangan secara parsial dapat memilih PT. Bank Mandiri Tbk, PT. Bank Rakyat

Indonesia Tbk, PT. Bank Negara Indonesia Tbk sebagai perusahaan perbankan yang memiliki kinerja keuangan yang jauh lebih baik dibanding- kan dengan PT. Bank Tabungan Negara Tbk. Sedangkan secara simultan, hasil uji statistik dalam penelitian ini menunjukan adanya perbedaan kinerja keuangan antara PT. Bank Mandiri Tbk, PT. Bank Rakyat Indonesia Tbk, PT. Bank Negara Indonesia Tbk,PT. Bank Tabungan Negara Tbk dan PT. Bank Tabungan Negara Tbk, yang diukur dengan menggunakan 4 (empat) rasio keuangan selama periode 2010 – 2015. Hasil ini mengindikasikan bahwa pembentukan portofolio yang terdiri dari keempat jenis saham tersebut yaitu PT. Bank Mandiri Tbk, PT. Bank Rakyat Indonesia Tbk, PT. Bank Negara Indonesia Tbk dan PT. Bank Tabungan Negara Tbk, akan memberikan hasil yang optimal mengingat keempat saham tersebut memiliki karakteristik yang berbeda dilihat dari kinerja keuangannya.

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PENGARUH BIAYA PRODUKSI TERHADAP HARGA JUAL PADA PT. PANCA USAHA PALOPO PLYWOOD

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ABSTRAK

Pada masa sekarang ini, seorang produsen dituntut untuk cermat terhadap permintaan konsumen. Mulai dari memberikan harga yang murah untuk barang produksinya, menciptakan produk yang mempunyai kualitas bagus. Namun, terdapat hal lain yang harus diperhatikan oleh seorang produsen yaitu manajemen keuangan. Biaya produksi yang dikeluarkan oleh pemilik perusahaan harus dicatat dengan baik. Hal tersebut dapat dijadikan sebagai bahan evaluasi dan bahan penilaian manajemen keuangan agar menjadi lebih baik. Serta dapat mengontrol besaran setiap harga yang ditentukan untuk setiap produknya. Penelitian ini bertujuan untuk menganalisis pengaruh biaya produksi terhadap harga jual pada PT. Panca Usaha Palopo Pywood. Metode yang digunakan dalam penelitian ini adalah analisis regresi linear sederhana dengan uji t dan koefisien determinasi (R^2). Sampel dari penelitian ini adalah data biaya produksi dan data harga jual pada tahun 2013-2015 pada PT. Panca usaha palopo plywood, pengujian dilakukan dengan bantuan komputer program SPSS (Statistic Program For Social Science) versi 21,0. Data yang digunakan dalam penelitian ini adalah data primer dan sekunder. Data primer meliputi sejarah singkat perusahaan dan struktur organisasi perusahaan, sedangkan data sekunder meliputi data biaya produksi dan data harga jual. Hasil penelitian hubungan variabel independen terhadap variabel dependen (biaya produksi terhadap harga jual pada PT. Panca usaha palopo plywood) menunjukkan bahwa biaya produksi berpengaruh positif dan signifikan. Berdasarkan hasil penelitian di atas, dapat disimpulkan bahwa secara parsial variabel biaya produksi berpengaruh terhadap harga jual dengan nilai signifikan 0,000 < 0,05.

Kata Kunci: *Biaya produksi, harga jual*

ABSTRACT

At this time, a producer is required to be careful of consumer demand. Starting from providing a cheap price for its production goods, creating a product that has good quality. However, there are other things that must be considered by a producer that is financial management. Production costs incurred by the owner of the company should be properly recorded. It can be used as evaluation material and financial management appraisal materials to be better. And can control the amount of each price determined for each product. This study aims to analyze the effect of production costs on the sale price at PT. Panca Usaha Palopo Pywood. The method used in this research is simple linear regression analysis with t test and coefficient of determination (R2). Sample of this research is data of production cost and selling price data in year 2013-2015 at PT. Panca business palopo plywood, testing is done with the help of computer program SPSS (Statistic Program For Social Science) version 21.0. The data used in this research are primary and secondary data. Primary data includes a brief history of the company and the organizational structure of the company, while secondary data includes production cost data and selling price data. The result of research of independent variabel relation to dependent variabel (production cost to selling price at PT Panca Usaha palopo plywood) shows that production cost have positive and significant effect. Based on the results above, it can be concluded that the partial variabel cost of production affect the selling price with a significant value 0.000 <0.05.

Keywords: *Production cost, selling price*

PENDAHULUAN

Industri plywood merupakan salah satu primadona industri hasil hutan, dibandingkan dengan produk industri hasil hutan lainnya karena perolehan devisa dari plywood adalah yang terbesar. Disamping itu, plywood merupakan salah satu industri andalan ekspor yang telah memberikan sumbangan sangat penting bagi pembangunan negara. PT. Panca Usaha Palopo Plywood yang berlokasi di Kecamatan Bua, Kabupaten Luwu, Sulawesi Selatan, merupakan salah satu industri plywood tertua dan terbesar di Sulawesi Selatan dengan jumlah karyawan sekitar 2.853 tenaga kerja lokal termasuk pekerja harian yang direkrut dari masyarakat sekitar.

Perkembangan kebutuhan panel kayu untuk pembangunan Nasional maupun pembangunan di Provinsi Sulawesi Selatan pada khususnya, tentunya mendorong industri plywood PT. Panca Usaha Palopo Plywood untuk berproduksi guna memenuhi permintaan konsumen. Dalam suatu perusahaan, baik perusahaan yang menghasilkan barang maupun jasa, produksi merupakan salah satu bidang yang mempunyai kedudukan penting di samping bidang-bidang lainnya, bahkan antara satu bidang dengan bidang lainnya tidak dapat dipisahkan. Produksi adalah segala kegiatan dalam menciptakan dan menambah kegunaan suatu barang, jasa, untuk kegiatan yang mana membutuhkan faktor produksi berupa tanah, modal, tenaga kerja, dan *skill.*

Peranan produksi dalam perusahaan adalah kegiatan untuk pengolahan berbagai macam sumber menjadi barang dan jasa (hasil) untuk dapat dijual oleh perusahaan sehingga dapat memuaskan konsumen. Suatu hasil produksi baru bernilai apabila sudah siap dipasarkan atau sampai ke tangan konsumen untuk memenuhi keinginan dan kebutuhan mereka. Perusahaan dituntut untuk bisa menghasilkan barang dan jasa yang bernilai dan berkualitas baik. Hal ini bertujuan untuk menghadapi persaingan antar perusahaan yang memproduksi produk sejenis, Dalam pembuatan produk terdapat dua kelompok biaya yaitu: biaya produksi dan biaya nonproduksi, biaya yang dikeluarkan harus diklasifikasikan secara jelas, sehingga memungkinkan dalam penentuan harga jual produksi secara teliti. Dalam hal ini peran biaya produksi sangat penting, terutama dalam meningkatkan keunggulan bersaing dari suatu perusahaan.

Biaya produksi merupakan biaya-biaya yang terjadi untuk mengolah bahan baku menjadi produk jadi yang siap untuk dijual. Dalam perusahaan penentuan harga jual produk dan jasa merupakan salah satu jenis pengambilan keputusan manajemen yang penting. Harga jual adalah sejumlah biaya total (biaya produksi, biaya pemasaran, dan biaya administrasi dan umum) ditambah jumlah laba (*markup*) yang diinginkan perusahaa. Bagi manajemen, penentuan harga jual produk atau jasa bukan hanya merupakan kebijakan dibidang pemasaran atau bidang keuangan melainkan merupakan kebijakan yang berkaitan dengan seluruh aspek kegiatan perusahaan.

Satu-satunya faktor yang memiliki kepastian relatif tinggi yang berpengaruh dalam penentuan harga jual adalah biaya. Biaya memberikan informasi batas bawah suatu harga jual harus ditentukan, dibawah biaya penuh produk dan jasa harga jual akan mengakibatkan kerugian bagi perusahaan. Kerugian yang timbul akibat harga jual dibawah biaya produk atau jasa dalam jangka waktu tertentu mengakibatkan perusahaan akan mengalami kerugian dan mengganggu pertumbuhan perusahaan. Maka sebelumnya harus diketahui jumlah

penjualannya, dengan demikian manajer sebagai penentu harga jual senantiasa memerlukan informasi biaya produk atau jasa dalam pengambilan keputusan penentuan harga jual, karenanya sangatlah penting memperhitungkan biaya produksi dan menetapkan harga jual produk dengan tepat untuk memberikan perlindungan bagi perusahaan dari kemungkinan kerugian.

Berdasarkan latar belakang di atas dapat di tarik suatu rumusan masalah apakah biaya produksi berpengaruh positif dan signifikan terhadap harga jual pada PT. Panca Usaha Palopo Plywood. Tujuan dari penelitian ini untuk mengetahui seberapa besar pengaruh biaya produksi terhadap harga jual pada PT. Panca Usaha Palopo Plywood**.** Manfaat dalam penelitian ini terbagi atas dua yaitu teoritis dan praktis. Secara teoritis penelitian ini dapat dijadikan sebagai sumber penerapan teori bagi penulis selama di bangku kuliah untuk memperoleh pengetahuan tentang pengaruh biaya produksi terhadap harga jual. Secara praktis Penelitian ini diharapkan menjadi bahan refrensi penelitian-penelitian serupa dimasa yang akan datang serta memberikan informasi yang dapat digunakan sebagai bahan masukan bagi PT. Panca Usaha Palopo Plywood.

TINJAUAN PUSTAKA DAN HIPOTESIS

Biaya Produksi

Biaya Produksi yaitu biaya-biaya yang dikeluarkan dalam pengolahan bahan baku menjadi produk jadi (Mulyadi, 2012: 16). Biaya Produksi merupakan biaya-biaya yang terjadi untuk mengolah bahan baku menjadi produk jadi yang siap untuk dijual (Ony Widilestariningtyas et al 2012: 12). Biaya produksi adalah biaya yang berhubungan dengan proses produksi dan harus dikeluarkan untuk mengolah dan membuat bahan baku menjadi produk jadi yang siap untuk dijual dan biaya produksi sangat berpengaruh dalam menentukan harga jual suatu produk

Metode Pengumpulan Harga Pokok Produksi

Pengumpulan Harga Pokok Produksi sangat ditentukan oleh cara produksi. Adapun macam-macam jenis metode Pengumpulan Harga Pokok Produksi adalah sebagai berikut:

1. Metode Harga Pokok Pesanan

   Penentuan harga pokok pesanan merupkaan suatu cara penentuan harga pokok yang membebankan biaya produksi untuk menjumlahkan produk tertentu yang dapat dipisahkan identitasnya. Metode ini digunakan oleh perusahaan yang mengolah produksinya berdasarkan atas pesanan.

Kakrakteristik metode harga pokok pesanan adalah sebagai berikut:

a) Digunakan jika perusahaan memproduksi berbagai macam produk sesuai dengan spesifikasi pemesan dan setiap jenis produk perlu dihitung harga pokoknya secara individual.

b) Biaya produksi harus dipisahkan menjadi dua golongan pokok yaitu biaya produksi langsung dan tidak langsung.

c) Biaya produksi langsung terdiri dari biaya bahan baku dan biaya tenaga kerja, sedangkan biaya produksi tidak langsung disebut dengan istilah biaya overhead pabrik.

d) Biaya langsung diperhitungkan sebagai harga pokok pesanan tertentu berdasarkan biaya yang sesungguhnya terjadi, sedangkan biaya overhead pabrik diperhitungkan kedalam harga pokok pesanan berdasarkan tarif yang ditentukan dimuka.

e) Harga pokok perunit produk dihitung pada saat pesanan selesai diproduksi

f) Pada harga pokok pesanan, harga pokok dikumpulkan untuk setiap pesanan jumlah biaya produksi akan dihitung setiap pesanan selesai.

2. Metode Harga Pokok Proses

Metode harga pokok proses merupakan pengumpulan harga pokok produksi yang digunakan perusahaan yang mengolah produknya secara massa. Di dalam metode ini biaya produksi dikumpulkan untuk setiap proses selama jangka waktu tertentu dan harga pokok produksi persatuan dihitung dengan cara membagi total biaya produksi dalam proses tertentu selama waktu yang berkaitan.

Karakteristik pengumpulan harga pokok produksi dalam metode harga pokok proses adalah sebagai berikut:

a) Biaya produksi dikumpulkan perdepartemen produksi perperiode akuntansi.

b) Harga pokok produk persatuan dihitung dengan cara membagi total biaya produksi yang dikeluarkan selama periode akuntansi tertentu dengan jumlah satuan produksi yang dihasilkan periode yang bersangkutan.

c) Penggolongan biaya produksi biaya produksi langsung dan biaya produksi tidak langsung diperlukan terutama jika perusahaan hanya menghasilkan satu macam produk.

d) Unsur yang digolongkan dalam BOP terdiri dari biaya produk selain biaya bahan baku dan bahan penolong serta biaya tenaga kerja.

Dalam suatu proses produksi tidak semua produk yang dioleh dapat menjadi produk yang baik yang memenuhi standar mutu yang telah ditetapkan. Kadang juga terdapat produk yang hilang ditinjau dari terjadinya, produk dapat hilang pada awal proses maupun akhir proses. Produk yang hilang pada awal proses berakibat:

a) Menaikkan harga pokok per satuan produk yang diterima dari departemen produksi sebelumnya

b) Menaikkan harga pokok per satuan yang ditambahkan dalam departemen produksi setelah departemen produksi yang pertama.

Produk hilang yang terjadi diakhir proses berakibat menaikkan harga pokok persatuan produk yang ditransfer ke departemen berikutnya atau ke gudang.

Metode Penentuan Harga Pokok Produksi

Metode penentuan harga pokok produksi adalah cara memperhitungkan unsur-unsur biaya ke dalam harga pokok produksi. Abdul Halim et al (2013: 47), menyatakan bahwa Metode penentuan harga pokok produk adalah dengan membebankan semua unsur biaya produksi (biaya bahan baku, biaya tenaga kerja, dan biaya *overhead* pabrik) baik yang bersifat tetap maupun variabel kepada produk atau jasa.

Unsur-unsur biaya pada harga pokok produksi terdapat dua pendekatan yaitu metode, *full costing* dan metode *variable costing.*

a. Metode *Full Costing*

Full costing merupakan metode penentuan harga pokok produksi yang memperhitungkan semua unsur biaya produksi kedalam harga pokok produksi, yang terdiri dari biaya bahan baku, biaya tenaga kerja langsung, dan biaya *overhead* pabrik, baik yang berperilaku variabel maupun tetap, dengan demikian harga pokok produksi menurut *full costing* terdiri dari unsur biaya produksi (Mulyadi, 2010: 17).

b. Metode *Variabel Costing*

Variable costing adalah merupakan metode penentuan harga pokok produksi yang hanya memperhitungkan biaya produksi yang berperilaku variabel ke dalam harga pokok produksi, yang terdiri dari bahan baku, biaya tenaga kerja langsung, dan biaya *overhead* pabrik variabel (Mulyadi, 2010: 18).

Harga Jual

Harga jual adalah upaya untuk menyeimbangkan keinginan untuk memperoleh manfaat sebesar-besarnya dari perolehan pendapatan yang tinggi dan penurunan volume penjualan jika harga jual yang dibebankan ke konsumen terlalu mahal (Krismiaji et al, 2011: 326**).** Harga jual membebankan biaya atas dasar nilai jual suatu produk dan terdapat hubungan secara langsung antara biaya dan harga jual, harga jual dari suatu produk lebih banyak ditentukan oleh biaya produksi, berdasarkan penjelasan tersebut, biaya produksi mempunyai pengaruh terhadap penentuan harga jual produk. Karena itu untuk mencapai laba yang diinginkan oleh perusahaan salah satu cara yang dilakukan untuk menarik minat konsumen adalah dengan cara menentukan harga yang tepat untuk produk yang terjual, harga yang tepat adalah harga yang sesuai dengan kualitas produk suatu barang, dan harga tersebut dapat memberikan kepuasan kepada konsumen.

Faktor-faktor Penentuan Harga Jual

Secara umum ada dua faktor utama yang perlu dipertimbangkan dalam menetapkan harga yaitu faktor internal perusahaan dan faktor lingkungan eksternal.

a. Faktor Internal Perusahaan

1) Tujuan pemasaran

Faktor utama yang menentukan dalam penetapan harga adalah tujuan pemasaran perusahaan. Tujuan tersebut bisa berupa maksimisasi laba, mempertahankan kelangsungan hidup perusahaan meraih pangsa pasar yang besar, menciptakan kepemimpinan dalam hal kualitas, mengatasi persaingan, melakukan tanggung jawab sosial dll.

2) Strategi Bauran Pemasaran

Harga hanyalah salah satu komponen dari bauran pemasaran. Oleh karena itu harga perlu dikoordinasikan dan saling mendukung dengan bauran pemasaran lainnya, yaitu produk, distribusi dan promosi.

3) Biaya

Biaya merupakan faktor yang menentukan harga minimal yang harus ditetapkan agar perusahaan tidak mengalami kerugian. Oleh karena itu setiap perusahaan pasti menaruh perhatian besar pada aspek struktur biaya (ettap dan variabel) serta jenis-jenis

biaya lainnya, seperti *out – of – pocket cost, incremental cost, opportunity cost, dan replacement cost.*

4) Organisasi

Manajemen perlu memutuskan siapa di dalam organisasi yang harus menetapkan harga, setiap perusahaan menangani masalah penetapan harga menurut caranya masing-masing. Pada perusahaan kecil, umunya harga ditetapkan oleh manajemen puncak, pada perusahaan besar, seringkali masalah penetapan harga ditangani oleh divisi atau manager suatu lini produk. Dalam pasar industri para wiraniaga (*sales people)* diperkenankan untuk bernegosiasi dengan pelanggannya guna menetapkan rentang *(range*) harga tertentu. Dalam industri dimana harga merupakan faktor kunci (misalnya perusahaan minyak, penerbangan luar angkasa) biasanya setiap perusahaan memiliki departemen pemasaran atau manajemen puncak. Pihak-pihak lain yang memiliki pengaruh terhadap penetapan harga adalah manajer penjualan, manajer produksi, manajer keuangan dan akuntan.

b. Faktor Lingkungan Eksternal

1. Sifat Pasar dan Permintaan

Setiap perusahaan perlu memahami sifat pasar dan permintaan yang dihadapinya, apakah termasuk pasal persaingan sempurna, persaingan monopolistik, oligopoli atau monopoli. Faktor lain yang tidak kalah pentingnya adalah elastisitasnya permintaan.

2. Persaingan

Kekuatan pokok dalam persaingan suatu industri, yaitu persaingan dalam industri yang bersangkutan, produk substitusi, pemasok, pelanggan dan ancaman pendatang baru, informasi-informasi yang dibutuhkan untuk menganalisis karakteristik persaingan yang dihadapi.

3. Unsur-unsur lingkungan eksternal lainnya

Selain faktor diatas, perusahaan juga perlu mempertimbangkan faktor kondisi ekonomi (inflasi, tingkat bunga) kebijakan dan peraturan pemerintah dan aspek sosial (kepedulian terhadap lingkungan).

METODE PENELITIAN

Berdasarkan jenis datanya, data yang digunakan dalam penelitian ini yakni data kuantitatif yaitu data yang dapat dihitung atau data yang berupa angka-angka. Sumber data yang digunakan dalam penelitian ini yakni data sekunder yang diperoleh dari catatan atau dokumen

penting yang dimiliki perusahaan yang ada kaitannya dengan penelitian ini. Populasi dalam penelitian ini yaitu data laporan keuangan PT. Panca Usaha Palopo Plywood, adapun sampel pada penelitian ini yaitu data mengenai biaya produksi dan harga jual pada tahun 2013-2015. Waktu yang digunakan dalam penelitian ini kurang lebih 2 bulan yaitu mulai dari bulan April-Mei 2017. Analisis yang digunakan yaitu analisis regresi sederhana adapun alat analisis yang digunakan yaitu dengan menggunakan SPSS.

HASIL DAN PEMBAHASAN

PENGUJIAN HIPOTESIS

Pengujian Regresi Linear Sederhana

Uji regresi linear sederhana digunakan untuk mengetahui ada tidaknya pengaruh variabel independen terhadap variabel dependen.

Tabel 4.1

Uji regresi linear sederhana

Coefficients[a]

Model		Unstandardized Coefficients	
		B	Std. Error
1	(Constant)	920182370.203	687416973.038
	biaya produksi	1.008	.020

a. Dependent Variabel: harga jual

Sumber: Output SPSS 21.0, 2017

Dari tabel di atas, dapat diperoleh rumus regresi sebagai berikut:

1) Dalam persamaan regresi diatas, konstanta (a) adalah sebesar 920182370,203 hal ini mengandung arti bahwa jika biaya produksi nilainya konstant, maka harga jual produk PT. Panca Usaha Palopo Plywood sebesar 920182370,203.
2) Nilai 1,008 dari hasil uji regresi tersebut berpengaruh positif terhadap haga jual. Hal ini mengandung arti bahwa setiap kenaikan biaya produksi 1,008 akan berpengaruh terhadap harga jual sebesar satu satuan.
3)

Tabel 4.2

Uji Parsial (Uji t)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	920182370.203	687416973.038		1.339	.210
	biaya produksi	1.008	.020	.998	51.073	.000

a. Dependent Variabel: harga jual

Sumber: Output SPSS 21.0, 2017

Hasil pengujian variabel independen terhadap variabel dependen secara parsial yang dilakukan dengan uji statistik t menyatakan bahwa Biaya Produksi berpengaruh terhadap Harga Jual. Dari tabel diatas diketahui bahwa variabel Biaya Produksi memiliki probabilitas signifikansi 0,000 dimana nilai tersebut < 0,05. Dengan demikian H_0 diterima hal ini berarti Biaya Produksi berpengaruh positif terhadap Harga Jual pada PT. Panca Usaha Palopo Plywood.

Tabel 4.3

Uji Koefisien Determinasi (R^2)

Model Summary[b]

Model	R	R Square	Std. Error of the Estimate
1	.998[a]	.996	161835981.846

a. Predictors: (Constant), biaya produksi

b. Dependent Variabel: harga jual

Sumber: Output SPSS 21.0, 2017

Berdasarkan tabel tersebut, menunjukkan nilai koefisien korelasi R sebesar 0,998. Hal ini berarti hubungan antara biaya produksi terhadap harga jual adalah sangat kuat karena memiliki nilai koefisien korelasi diatas 0,05. Sedangkan R *Square* yang diperoleh sebesar 0,996 ini menunjukkan bahwa harga jual dipengaruhi oleh variabel biaya produksi sebesar 99,6%, sedangkan sisanya 0,4% dipengaruhi oleh variabel lain yang belum diteliti dalam penelitian ini.

Berdasarkan hasil pengujian statistik secara parsial (uji t) yang telah dilakukan menyatakan bahwa variabel Biaya Produksi berpengaruh terhadap Harga Jual dengan nilai signifikan 0,000 < 0,05 dan hasil uji regresi linear sederhana menunjukkan nilai koefisien 1.008 diperoleh hasil bahwa variabel Biaya Produksi berpengaruh positif terhadap Harga Jual pada PT. Panca Usaha Palopo Plywood.

PENUTUP

Berdasarkan hasil uji regresi tersebut dapat dikatakan nilai koefisien biaya produksi sebesar 1,008 berpengaruh terhadap harga jual hal ini mengandung arti bahwa setiap kenaikan biaya produksi maka variabel harga jual naik sebesar 1,008. Sedangkan secara parsial (uji t) biaya produksi berpengaruh terhadap harga jual dengan nilai signifikan 0,000 < 0,05. Dari nilai koefisien R *Square* sebesar 0,996 ini menunjukkan bahwa 99,6% harga jual pada PT. Panca Usaha Palopo Plywood dipengaruhi oleh variabel biaya produksi, sedangkan sisanya 0,4% dipengaruhi oleh faktor lain yang tidak diteliti dalam penelitian ini.

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Asian Economic and Financial Review
ISSN(e): 2222-6737
ISSN(p): 2305-2147
DOI: 10.18488/5002.v12i2.4414
Vol. 12, No. 2, 89-98.

URL: www.aessweb.com

THE DETERMINANTS OF ADDING NON-PRODUCTION COSTS WHEN CALCULATING PRODUCT COSTS: EVIDENCE FROM THE SAUDI INDUSTRIAL SECTOR

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Article History
Received: 8 November 2021
Revised: 30 December 2021
Accepted: 17 January 2022
Published: 1 February 2022

Keywords
Cost system complexity
Cost system design
Importance of cost data
Non-production costs
Usage of cost data.

JEL Classification:
M41.

ABSTRACT

The quality of decision making and the level of performance are greatly affected by the accuracy of both production and non-production costs. While both components are important in increasing the accuracy of product costs in decision making, research into the inclusion of non-production costs is limited. Therefore, this research aims to examine the determinants of the addition of non-production costs when calculating product costs for use in decision making. This research utilized a questionnaire survey strategy to collect data from Saudi industrial operating units. The results of this research show that the level of cost data importance and its usage in decision making has no effect on adding non-production costs when calculating product costs, while the level of cost system complexity does. The results also add to the cost system design literature with regard to the addition of non-production costs when calculating product costs in the decision-making process.

Contribution/Originality: This research contributes to the cost system design literature by examining the influence of two important factors (the level of cost data importance and its use in decision making, and the level of cost system complexity) on the addition of total non-production costs rather than just the indirect component of these costs when calculating product costs for use in decision making.

1. INTRODUCTION

The accuracy of product costs is important in promoting informed decision making and optimal performance (Brierley, 2013; Ittner, Lanen, & Larcker, 2002; Pizzini, 2006). To obtain more accurate product costs for decision making use, industrial operating units should account for the production costs (direct material, labor, and production overhead costs) and non-production costs (e.g., administrative, selling, and marketing costs) as they are both important components of total product costs (Drury & Tayles, 1994; Johnson & Loewe, 1987). Omitting any of these components can reduce the accuracy of product costs and, subsequently, performance (Kaplan, 1988; Kaplan & Cooper, 1998). When calculating product costs for decision making use, operating units are assumed to include production costs as they represent an observable component of product costs. This assumption is also supported by the fact that production costs are required as part of product costs calculated for financial reporting purposes. However, operating units are inconsistent regarding the addition of non-production costs when calculating product costs for decision making use because most of these costs are not a clear component of product costs and are not allowed to be part of product costs calculated for financial reporting purposes (Brierley, 2017; Drury & Tayles,

1994; Lamminmaki & Drury, 2001). This raises the question of what affects the addition of non-production costs when calculating product costs for decision making use. To the author's knowledge, only two studies have partially focused on the determinants of adding non-production costs when calculating product costs for decision making use (Brierley, 2015; Brierley, 2017). Despite the contributions of these studies, three research gaps remain.

The first research gap is the lack of focus on total non-production costs. The prior literature focused only on the indirect component of non-production costs (Brierley, 2015; Brierley, 2017). Including both direct and indirect non-production costs is important as each represents a considerable aspect of non-production costs and is related to the accuracy of product costs, and is therefore necessary to clearly understand the determinants of adding non-production costs when calculating product costs for decision making use (Drury & Tayles, 1994; Johnson & Loewe, 1987; Kaplan, 1988).

The second research gap is the lack of a quantitative examination of the effect of "the level of cost data importance and usage in decision making" on the addition of non-production costs when calculating product costs for decision making use. The importance and usage of cost data signals the level of dependence on cost data in decision making and, therefore, drives operating units to focus on the accuracy of cost data and, hence, assign both production and non-production costs to products (Brierley, Cowton, & Drury, 2006; Charaf & Bescos, 2013; Hoque, 2000; Ismail & Mahmoud, 2012).

The third research gap is the lack of investigation into the link between cost system complexity (CSC) and the addition of non-production costs when calculating product costs for decision making use. This is surprising, given that the level of CSC reflects the level of complexity of the business and production environments, which affect the level of detail of the cost data and, therefore, the consideration of both production and non-production costs (Brierley, 2015).

Given (1) the importance of non-production costs in obtaining accurate product costs and achieving optimal performance; (2) the omission of focusing on total non-production costs; and (3) the lack of consideration of the effect of both the level of cost data importance and usage in decision making and the level of CSC on the addition of total non-production costs, this paper aims to test the influence of the level of cost data importance and usage in decision making and the level of CSC on adding non-production costs when calculating product costs for decision making use.

The remaining sections include a literature review and development of propositions section (Section 2), a research methodology and methods section (Section 3), a results section (Section 4) and a discussion and conclusion section (Section 5).

2. LITERATURE REVIEW AND RESEARCH PROPOSITIONS

Since introducing activity-based costing (ABC) in the 1980s as an improved methodology to assign indirect costs, including the elements of indirect production and non-production costs to products and, hence, to produce more accurate costs for decision making use (Cooper, 1988a; Cooper, 1988b; Cooper, 1989a; Cooper, 1989b), a considerable amount of research has been published to examine the determinants and consequences of ABC (Al-Sayed & Dugdale, 2016; Aljabr, 2020; Alsayegh, 2020; Hadid, 2019; Malmi, 1999; Rankin, 2020). This line of research has provided valuable insights regarding the nature of the effect of various factors, such as competition (Malmi, 1999; Nguyen & Brooks, 1997), production complexity (Aljabr, 2020; Schoute, 2011), the level of indirect costs (Cohen, Venieris, & Kaimenaki, 2005; Jusoh & Miryazdi, 2015) and strategy (Gosselin, 1997; Hadid, 2019), on the adoption of ABC. It has also provided insights about the outcomes of ABC adoption (Vetchagool, Augustyn, & Tayles, 2020). Collectively, this line of research has helped to enhance our knowledge in relation to situations in which ABC is worth the investment (Aljabr, 2020; Kaplan & Cooper, 1998; Stuart, 2013).

In the early 2000s, the research into ABC adoption was extended to cover not only ABC, but also the level of CSC (Abernethy, Lillis, Brownell, & Carter, 2001; Moalla & Mezouel, 2020; Moalla & Basti, 2020; Schoute, 2009;

Schoute & Budding, 2017b; Schoute & Budding, 2017a). This line of research has contributed towards improving our understanding of CSD by providing insights regarding the determents and consequences of CSC, a concept that covers both traditional cost systems and ABC (Al-Omiri & Drury, 2007).

The literature review identified two studies that partially address the issue of interest to this research, namely the determinants of the addition of non-production costs when calculating product costs for decision making use (Brierley, 2015; Brierley, 2017). Brierley (2015) adopted a quantitative approach using a questionnaire to examine the determinants of adding non-production costs when calculating product costs. Unexpectedly, the study found that the percentage of these costs negatively affects their inclusion in product costs. In addition, the study found no support for the effect of competition, customization, the effect of the financial accounting requirements on product costing and operating unit size. Brierley (2017) adopted a qualitative approach using interviews and found that the main reasons for adding non-production overhead costs when calculating product costs were to account for them in pricing decisions, to calculate the relevant product costs for various decisions, and to recover them to avoid losses. In addition, the study reported that the main reasons for excluding these costs were the impact of the parent company, and the view that these costs are either irrelevant for decision making or difficult to assign to products accurately.

As mentioned in Section 1, no study has considered the direct component of non-production costs along with the indirect component, even though the former represents a critical part of product costs that contributes towards its accuracy (Kaplan & Cooper, 1998). In addition, no quantitative study has accounted for the effect of the level of cost data importance and usage that reflects the extent of the reliance on cost data when making decisions and, subsequently, affects the addition of both production and non-production costs when calculating product costs. The qualitative results reported by Brierley (2017) provided evidence of the link between the level of cost data importance and usage in decision making and the addition of the indirect component of non-production costs when calculating product costs for decision making use.

Furthermore, the effect of CSC on the addition of total non-production costs when calculating product costs for decision making use has been neglected, despite the fact that the level of CSC indicates the level of complexity of the business and production environments that impact the amount of detail of the cost data and, subsequently, the addition of both production and non-production costs (Brierley, 2015). In particular, high levels of CSC reflect high complex business and production environments that require detailed product costs, which should cover both production and non-production costs, in order for businesses to be in a position to compete and succeed (Drury & Tayles, 2005).

Given the above, this paper will test the following propositions:

Proposition 1: The level of cost data importance and usage in decision making is positively related to the addition of total non-production costs when calculating product costs for decision making use.

Proposition 2: The level of CSC is positively related to the addition of total non-production costs when calculating product costs for decision making use.

3. RESEARCH METHODOLOGY AND METHODS

A questionnaire was utilized to achieve the research aim, which is to examine the determinants of adding non-production costs when calculating product costs for decision making use. This method enables the collection of quantitative data from a large number of participants and analysis of the data using suitable statistical analysis techniques. The questionnaire is composed of tailored questions to collect reliable responses regarding the research constructs. To enhance the quality and number of responses, the questionnaire was constructed and administrated using the guidelines suggested by Dillman, Smyth, & Christian (2014). The data were collected from industrial operating units operating in Saudi Arabia. The industrial sector was chosen because it incorporates both production and non-production costs, which makes it possible to test the determinants of adding the latter costs. Saudi Arabia

was deemed a suitable research context because the country has been experiencing developments in its business and production environments that are likely to impact the cost system design (CSD) and the inclusion of both production and non-production costs in product costs (Vision 2030, 2018; World Trade Organization (WTO), 2021).

Together, the Saudi Industrial Property Authority (MODON) and the Royal Commission for Jubail and Yanbu (RCJY) databases were used as sample frames since they include the most up-to-date and comprehensive information about Saudi industrial operating units. MODON covers all Saudi industrial cities, except for Jubail and Yanbu, which are the only industrial cities covered by RCJY. The questionnaire was distributed to only 368 operating units due to the fact that not all of the required details were present in the databases, which necessitated making initial contact via either visits or phone calls. Although the administration process reduced the sample size to save time and cost, it enhanced the accuracy of the data and results because it made it possible to target the person responsible for the assignment of indirect costs to products who was also knowledgeable about the operating unit. Multiple reminders were sent to non-respondents. A total of 200 (54.3%) questionnaires were returned without any issues regarding missing or inconsistent data or outliers (Hair, Hult, Ringle, & Sarstedt, 2017; Tabachnick & Fidell, 2007). A non-response bias analysis that involved comparing early respondents (N = 120) with late ones (N = 80) revealed no significant differences between the two groups in relation to the level of cost data importance and usage in decision making and the level of CSC, which suggests no effect of this bias on the results of this research (Armstrong & Overton, 1977; Van der Stede, Young, & Chen, 2005).

The level of cost data importance and usage in decision making (Importance-USAGE) was measured by adding the mean value of two separate constructs, one for the extent of importance and the second for the extent of usage, adapted from Brierley et al. (2006) and Schoute (2009). Each construct involved nine items related to various decisions, each measured by the responses to a five-point Likert-scale question. A zero point response option was included to indicate non-usage of the decision. The mean values for the two constructs was calculated based on the used decisions. The level of CSC was measured by a composite score of the number of cost pools and drivers (CSC-Composite) (Drury & Tayles, 2005; Schoute, 2009). The addition of total non-production costs was measured by a dichotomous measure of adding versus not adding total non-production costs when calculating product costs for decision making use (Non-Production) (Brierley, 2015). All of the constructs involved in this research are single-item constructs and, accordingly, have a relationship of "1" with their single indicator, meaning that the constructs and indicators have identical values (Hair et al., 2017). For such constructs, no measurement evaluation is needed (ibid).

4. RESULTS

4.1. Descriptive Analysis

Table 1 shows that 74.50% (n = 149) of the operating units add non-production costs when calculating product costs for decision making use, while 25.50% (n = 51) do not. This indicates that the majority of operating units consider non-production costs as an important component of product costs and, hence, add them when calculating product costs for decision making use. The percentage of operating units that add non-production costs reported in this research (74.50%) is higher than that reported by Brierley (2015) (61.50%). Table 2 presents the descriptive information for the determinants of Importance-Usage and CSC-Composite. The results show that the level of Importance-Usage (mean = 7.89, median = 7.89, theoretical range: 1 to 10) is high, suggesting that operating units consider product cost data to be very important for decision making and use it extensively in when making decisions. However, the results showed that the level of CSC-Composite (mean = 5.85, median = 6, theoretical range: 0 to 15) is low, indicating that Saudi industrial operating units operate with less complex cost systems.

Table 1. Operating units' addition of non-production costs.

Addition of non-production costs when calculating product costs	N	%
No	51	25.50
Yes	149	74.50
Total	200	100.00

Table 2. Descriptive statistics for the research constructs.

Construct	Mean	Std. Deviation	Minimum	Maximum
Importance-Usage	7.89	1.19	3.33	10.00
Composite	5.85	3.45	0.00	15.00

Table 3 shows the Pearson correlations between the independent and dependent constructs. The results provide initial support for the effect of CSC-Composite on Non-Production as the correlation between the two is positive and significant, but they do not do so for the impact of Importance-Usage on Non-Production, as the correlation between the two is insignificant. The results also show a significant positive correlation between Importance-Usage and CSC-Composite, but it is small and does not raise a multicollinearity issue (Pallant, 2013).

Table 3. The Pearson correlations of all constructs.

	Importance-Usage	CSC-Composite	Non-Production
Importance-Usage	1.00	0.15*	0.07
CSC-Composite	0.15*	1.00	0.17*
Non-Production	0.07	0.17*	1.00

Note: * Correlation is significant at the 0.05 level (2-tailed).

4.2. Proposition Testing

Given that the dependent variable of Non-Production is a dichotomous variable, logistic regression analysis was used as it is the most appropriate statistical analysis method for dichotomous dependent variables that include two categories (Field, 2013; Hair, Black, Babin, & Anderson, 2019; Pallant, 2013). The method allows the use of both categorical and continuous predictors (i.e., independent variables) and can be applied after meeting assumptions related to sample size, multicollinearity and outliers (Pallant, 2013). In this research, the logistic regression model involved regressing Non-Production on Importance-Usage and CSC-Composite. Table 4 provides the results for the tested logistic model.[1] The results show that the model is significant, as indicated by the significance value of the Chi-square goodness of fit test (Chi-square = 6.22, $p < 0.05$). In addition, the results show that the Hosmer and Lemeshow goodness-of-fit statistic is not significant (6.51, $p > 0.05$), indicating a good model fit. Both results mean that the model was able to differentiate between operating units that add and do not add total non-production costs when calculating product costs. However, the amount of variation explained in non-Production is low (0.03 to 0.05), as indicated by the low Cox and Snell R squared and Nagelkerke R squared values. This indicates that other variables exist that affect non-Production that are not included in the model. In relation to the effect of Importance-Usage and CSC-Composite, the results agree with those of the correlation analysis, as only CSC-Composite was found to have a positive significant influence on Non-Production ($B = 0.12$, $p < 0.05$).

[1] The assumptions of the logistic regression analysis was met as the sample size was large enough (200 cases). The issue regarding outliers was resolved by removing multivariate outliers, and no issue was observed in relation to multicollinearity.

Table 4. Results of the logistic regression model of the determinants of non-production.

	B (Coefficient)	Standard error	Wald	Degree of freedom	Sig.	Exp (B)	Chi-square (sig.)	Hosmer and Lemeshow (sig.)	Cox & Snell R Squared	Nagelkerke R Squared
Importance-Usage	0.09	0.14	0.39	1.00	0.53	1.09	6.22 (0.045)	6.51 (0.59)	0.03	0.05
CSC-Composite	0.12	0.05	4.87	1.00	0.03	1.12				
Constant	-0.23	1.07	0.05	1.00	0.83	0.80				

5. DISCUSSION AND CONCLUSION

This paper aimed to test the effect of the level of cost data importance and usage in decision making (Importance-Usage) and the level of CSC (CSC-Composite) on the addition of total non-production costs when calculating product costs for decision making use (Non-Production). The paper is motivated by the importance of non-production costs in obtaining accurate product costs and achieving optimal performance, the omission of focusing on total non-production costs despite the importance of both the direct and indirect components of these costs, and the lack of consideration of the effect of both Importance-Usage and CSC-Composite on Non-Production, although the former factors encourage the addition of the latter when calculating product costs. Using questionnaire data obtained from the Saudi industrial sector, the results showed that Importance-Usage does not influence Non-Production, while CSC-Composite does.

The insignificant impact of Importance-Usage is surprising, given that the factor indicates the extent to which the operating unit relies on cost data in decision making and hence requires accurate product cost data that typically includes both production and non-production costs (Al-Omiri & Drury, 2007; Brierley et al., 2006; Hoque, 2000). The results do not support Proposition 1 and are in contrast to the qualitative findings of Brierley (2017), which showed a link between the level of cost data importance and usage and the addition of the indirect component of non-production costs in product costs. The insignificant results can be attributed to the fact that, although cost data is important and is used in decision making, non-production costs are not added due to the effect of the parent company and the presumed irrelevance of these costs for decision making or the lack of knowledge or resources to assign them to product costs accurately (Brierley, 2017). In addition, it is possible that a large proportion of Saudi operating units utilize the short-term perspective on calculating product costs for decision making use, which excludes most of the indirect components of production and non-production costs (Drury & Tayles, 2000, 2006). This is in contrast to the long-term perspective, which incorporates the avoidable part of indirect production and non-production costs advocated by ABC proponents (Kaplan, 1990; Labro, 2019). The utilization of the short-term perspective in calculating product costs for decision making use might be attributed to the fact that it is a widely taught perspective in most textbooks (Kaplan, 1990).

The significant effect of CSC-Composite on Non-Production conforms to the expectations indicated in Proposition 2, as higher levels of CSC-Composite are associated with higher levels of Non-Production. This effect supports the argument that CSC mirrors the extent of the complexity of the business and production environments that influence the level of detail of cost data and, hence, the addition of both production and non-production costs. These results, however, conflict with those of Brierley (2015), who found no support for the positive impact of multiple factors that represent surrogates to the business and production environments on Non-Production. This could be due to differences in the research context and the measure used for Non-Production.

This paper is not without limitations, meaning that there are future research opportunities. First, this research measured Non-Production as a dichotomous variable, although the extent of adding non-production costs can vary greatly between different operating units. Hence, future research should utilize continuous measures for Non-Production to capture the differences in practice regarding the addition of these costs when calculating product costs for decision making use. Second, this research assumed that the level of CSC is likely to reflect the business and production environments and the amount of detail required in cost data, although there is evidence that the design of the cost system does not always reflect the requirements of the business and production environments (Hiromoto, 1988; Merchant & Shields, 1993). Accordingly, future research should, in addition to considering CSC, account for factors, such as production complexity and competition, that reflect the business and production environments when testing for the determinants of Non-Production. Third, despite the suitability of the research strategy, namely a questionnaire survey, to achieve the research aim, it only offers limited interaction between the researcher and the participants. Therefore, future research can rely on field-based research to obtain a deeper understanding of the practices and determinants of Non-Production (Modell, 2005). Notwithstanding these

limitations, this paper contributes to the cost system design literature by examining the impact of the level of cost data importance and usage in decision making and the level of cost system complexity on the addition of total non-production costs when calculating product costs for decision making use.

Funding: The author acknowledges the Deanship of Scientific Research at King Faisal University for the financial support under Nasher Track (Grant number: 186159).
Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.

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THE EFFECT OF PRODUCTION COSTS AND OPERATIONAL COSTS ON NET PROFIT ON METALS MANUFACTURING COMPANIES AND SOMETHING LISTED ON THE STOCK EXCHANGE INDONESIA (IDX) PERIOD 2013-2017

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ABSTRACT

Based on the results of the research, the cost of production producestcount 2,958 (tcount 2,958 > ttable 2,034) and sig. 0.006 < 0.05. Thus H0 is rejected. This means that there is a significant positive effect on production costs on profits in metal and similar manufacturing companies listed on the Indonesia Stock Exchange for the 2013-2017 period. Based on the results of the research on Operating Costs to Profit, the tcount value is 2,258 (tcount2,258 > ttable 2.034) and the sig value is 0.031 <0.05. Thus H0 is rejected. This means that there is a positive and significant effect of Operating Costs on Profits in Metal and Similar Sector Manufacturing Companies listed on the Indonesia Stock Exchange for the 2013-2017 period. Based on the results of the research on Production Costs and Operational Costs, the fcount value is 133.4857 while the ftable value is 2.90.

Keywords: *Production Cost, Operational Cost and Net Profit*

A. Introduction

The company as a form of organization generally has certain goals to be achieved in an effort to meet the interests of its members. In general, a company is an organization where resources (inputs), such as raw materials and labor are processed to produce goods or services (outputs) for customers. The purpose of a company being founded is to make a profit for its owners. To be able to make a profit, a company must have a product that can be sold to the public. These products can be in the form of non-physical products, raw materials, or finished goods that are ready for consumption. To be able to produce a certain product, every company must have various resources needed to produce that product. These resources can include land, machinery, labor, capital, raw materials, and others. Without having resources and products, an organization cannot be called a company, because a company is an organization where resources such as raw materials and labor are processed to produce goods or services for customers (Rudianto, 2009).

profit is the difference between the amount received from the customer for the goods or services produced and the amount spent to purchase natural resources in producing the goods or services. A company's profit is a company's description of the performance achieved from the general transaction process carried out by the company during a certain period, and profit can be used as an indicator for stakeholders to assess the extent of management's performance in managing a company. In achieving the company's profit will not be separated from the name of the cost, because the cost is a sacrifice of the company in order to earn revenue. Profit is the general purpose of the existence of every company, so operating profit is an important element that drives all productive activities in a company. The need to generate operating profits is the main driving factor for all economic activities carried out by the company, starting from determining the products to be produced by the company, finding and collecting the necessary resources so as to move and direct each of the resources owned by the company to achieve the company's general goals (Rudianto, 2009). 2009). Manufacturing companies are companies that process

inventories of raw materials into finished goods or called production activities (Hermawan, 2008:157) says that: "Activities or processes to produce finished goods clearly require a number of economic resources which can be broadly divided into: labor , raw materials, and other resources that are often referred to as overhead." The production process is the largest portion as well as the main process of providing goods, so a profit-oriented company ensures that the products sold get a higher reward from the sacrifice of providing the finished goods (Wicaksono, 2006:21). One of the elements that affect profit are the costs incurred by the company during the production process, both production costs and costs incurred to make a number of goods or services. Production costs are grouped into three, namely raw material costs, direct labor costs and factory overhead costs (Hanggana, 2009). The production costs determine the selling price of a product or service which will affect the amount of profit earned. As stated by Mulyadi in his book cost accounting, states that production costs have an effect on operating profit. Production costs are costs used in the production process consisting of direct material costs and factory overhead costs (Bustami 2009). Production costs are an economic resource that is sacrificed to produce output, the output value is expected to be greater than the input sacrificed to produce the output so that organizational activities can generate profits.

B. Theoretical Basis

1. Profit

Profit is the element that is of most concern to users because profit figures are expected to be rich enough to show the overall performance of the company. Profit (profit) is the difference between the amount received from customers for goods or services produced with the amount spent to buy natural resources in producing these goods or services. A company's profit is a company's description of the performance achieved from the general transaction process carried out by the company during a certain period, and profit can be used as an indicator for stakeholders to assess the extent of management's performance in managing a company. Kasmir (2012) states that: "Net Profit (Net Profit) is profit that has been deducted by costs which are the company's burden in a certain period including taxes". According to Kuswadi (2005: 135), states that "the calculation of profit is obtained from income minus all costs". While the Financial Accounting Standards (SAK, 2007) defines: "Net income is a measure of performance or as a basis for other measures of return on investment or earnings per share. Based on the results of the above understanding, it can be concluded that profit is the total income minus the total costs.

2. Cost

Cost is the sacrifice of economic resources measured in units of money that has occurred or is likely to occur to achieve certain goals. These costs have not yet expired, and are classified as assets that are included in the balance sheet. Examples: raw material inventory, work-in-process inventory, finished product inventory, unused assets. (Bastain Bustami 2013:7)

According to Mulyadi (2002:2) cost is the sacrifice of economic resources, which is measured in units of money. What has happened or is likely to happen to achieve a particular goal. From this definition there are four main elements in costs, namely:

1. Cost is an economic resource
2. Measured in units of money
3. What has happened or is likely to have happened
4. The sacrifice is to obtain current and/or future benefits.

The following are some of the objectives of determining production costs:

1. To determine the exact amount of production costs
   Proof of transactions related to expenses is collected and used as the basis for recording the occurrence of expenses. collection of evidence, recording and

determining the occurrence of the right production costs will result in the right product costing

2. To control costs
   Collecting all proof of transactions, recording, and determining the right production costs will make management tasks easier in terms of monitoring and controlling production costs.
3. To help decision making
   Determination of production costs is also very helpful for a company to make short-term decisions, including:
   - Purchase of raw materials
   - Purchase of production equipment
   - Determination of the selling price of finished goods

3. Operating Cost

Rudianto (2009) defines the notion of operational costs, namely: "components of company costs outside of production costs are costs to market the company's products until they reach consumers along with all costs incurred related to administrative processes carried out by the company". while Bustami and Nurlela (2013) stated that: "Operational costs are costs that are not related to the production process but only include marketing costs and general and administrative costs". From the above understanding it can be concluded that operational costs are expenses related to operations, namely all expenses that are directly used for the production or purchase of traded goods including general, sales, and administrative costs. And operational costs are costs that must be incurred so that the company's activities or operations continue to run).

C. Research Method

Based on the problem formulation and objectives described in the previous chapter, this study uses a research approach, namely an associative approach. The operational definition is a definition based on what is observed. The operational definition is a reference from the theoretical basis used to conduct research where one variable can be linked to another so that the researcher can adapt it to the desired data. The population used in this study are metal manufacturing companies listed on the Indonesia Stock Exchange (IDX) in the period 2013 to 2017 as many as 16 companies. The samples used were 7 companies. The type of data used in this research is quantitative data. While the source of data in this study is secondary data obtained from the financial statements of metal manufacturing companies listed on the Indonesia Stock Exchange in the 2013-2017 period. In this study, the data collection method used by the author is a study of documentation, the type of data used in this study is secondary data. Secondary data is a source of research data obtained by researchers indirectly or through intermediary media. Secondary data in this study are in the form of profit and loss report data, production cost data and company operational cost data for 2013-2017.

Information on Profit and Loss Report data, Production Cost data and Operational Cost data are obtained from the Financial Statements of metal manufacturing companies listed on the Indonesia Stock Exchange. In this study, the data collection method used by the author is a study of documentation, the type of data used in this study is secondary data. Secondary data is a source of research data obtained by researchers indirectly or through intermediary media. Secondary data in this study are in the form of profit and loss report data, production cost data and company operational cost data for 2013-2017. Information on Profit and Loss Report data, Production Cost data and Operational Cost data are obtained from the Financial Statements of metal manufacturing companies listed

on the Indonesia Stock Exchange. In this study, the data collection method used by the author is a study of documentation, the type of data used in this study is secondary data. Secondary data is a source of research data obtained by researchers indirectly or through intermediary media. Secondary data in this study are in the form of profit and loss report data, production cost data and company operational cost data for 2013-2017. Information on Profit and Loss Report data, Production Cost data and Operational Cost data are obtained from the Financial Statements of metal manufacturing companies listed on the Indonesia Stock Exchange. Secondary data is a source of research data obtained by researchers indirectly or through intermediary media. Secondary data in this study are in the form of profit and loss report data, production cost data and company operational cost data for 2013-2017. Information on Profit and Loss Report data, Production Cost data and Operational Cost data are obtained from the Financial Statements of metal manufacturing companies listed on the Indonesia Stock Exchange. Secondary data is a source of research data obtained by researchers indirectly or through intermediary media. Secondary data in this study are in the form of profit and loss report data, production cost data and company operational cost data for 2013-2017. Information on Profit and Loss Report data, Production Cost data and Operational Cost data are obtained from the Financial Statements of metal manufacturing companies listed on the Indonesia Stock Exchange.

D. Research and Discussion Results

1. Test Statistic t

To test hypotheses 1 and 2, the author uses the t test (partial test). The t statistic test was conducted to test whether the independent variable (X) individually had a significant effect or not on the related variable (Y). The test results data obtained can be seen based on the following table:

Tabel 1
Partial Results (t)

Model	Unstandardized Coefficients		Standardized Coefficients	t	sig,
	B	Std, Error	Beta		
1 (Constant)	-,200	,083		-2,410	,022
Production cost	,665	,225	,543	2,958	,006
Operating costs	,481	,213	,414	2,258	,031

a, Dependent Variable: Net Profit

2. Discussion

Effect of Production Costs on Profit

Based on the results of the research above, for the effect of production costs on profits, the value is 2,958 > 2,034. And the significant value is 0.006 (less than 0.05). This means that H0 is rejected and Ha is accepted. Based on these results, it can be concluded that production costs have a positive and significant effect on profits in metal and similar manufacturing companies listed on the Indonesia Stock Exchange for the 2013-2017 period.

The high cost of production has an impact on the level of sales. In quantity, a company has limited its production by adjusting the production costs that must be incurred. When the product yields are reduced in quantity, of course, it also has an impact on the profits earned (Sadayy, 2014).

The importance of reducing production costs because it affects the profits earned by the company. To find out whether certain orders are able to generate gross profit or result in gross losses, management needs information on production costs that have been incurred to produce certain orders. (Mulyadi, 2005). In accordance with the opinion of Jopie Jusuf (2006) that, if the company can reduce operating costs, the company will be able to increase net income, and vice versa, if there is a waste of costs it will result in a decrease in profit. According to Efilia (2014) expenses are cash flows or other uses of assets or the incurrence of liabilities (a combination of both) from the delivery or production of goods, rendering of services, or carrying out other activities that constitute the entity's main business.

Effect of Operating Costs on Profit

Based on the results of the research above, for the effect of Operating Costs on Profit, the value is 2.258 > 2.034. And a significant value of 0.031 (smaller than 0.05). This means that H0 is rejected and Ha is accepted. Based on these results, it can be concluded that operating costs have a significant effect on profits in metal and similar manufacturing companies listed on the Indonesia Stock Exchange for the 2013-2017 period.

To generate profit or income, of course, the company must be willing to incur costs related to the company's operating activities. Revenue and expenses cannot be separated, where income is the result that can be obtained from operating activities carried out by the company while expenses are costs incurred or used to obtain the expected income by the company. Companywill show the size of the company's profit if it can reduce its operational costs. According to Kuswadi (2007) in the profit and loss calculation, the amount of this cost will reduce the profit or increase the company's loss. So, the greater the value of the operational costs, the smaller the profit obtained and vice versa if the operational costs can be minimized, the profit generated will be maximized as well.

Effect of Production Costs and Operating Costs on Profit

Based onThe f test results above obtained a significance value of 133.4857 > 2.90 and a significance value of 0.000 < 0.05. Based on these results, it proves that production costs and operating costs together have a significant effect on profits in metal and similar manufacturing companies listed on the Indonesia Stock Exchange for the 2013-2017 period. This is in line with research conducted by Meiza Efilia (2014) which states that production costs and operating expenses have a significant effect on profit. Likewise with research conducted by Regiana Eka Anjani (2015) which states that production costs and operating costs have a positive effect on profits.

E. Conclusions And Sugesstion

A.Conclusions

a. Based on the results of the research on Operating Costs to Profit,tcount 2,258 (tcount2,258 > ttable 2,034) and sig value 0.031 < 0.05.Thus H0 is rejected. This means that there is a positive and significant effect of Operating Costs on Profits in Metal and Similar Sector Manufacturing Companies listed on the Indonesia Stock Exchange for the 2013-2017 period.
b. Based on the results of the research on Production Costs and Operational Costs, the fcount value is 133.4857 while the ftable value is 2.90. Thus fcount > ftable which is 133.4857 > 2.90 and a significant value of 0.000 (smaller than 0.05) this proves that production costs and operating costs together have a significant effect on profits in listed metal and similar manufacturing companies on the

Indonesia Stock Exchange for the 2013-2017 period.

c. Based on the results of the research on Production Costs and Operational Costs, the fcount value is 133.4857 while the ftable value is 2.90. Thus fcount > ftable which is 133.4857 > 2.90 and a significant value of 0.000 (smaller than 0.05) this proves that production costs and operating costs together have a significant effect on profits in listed metal and similar manufacturing companies on the Indonesia Stock Exchange for the 2013-2017 period.

B. Sugesstions

1. For companies, it is better to spend minimal operational costs in order to get maximum profit. The company is also expected to pay attention to the value of the costs incurred in order to increase the value of income which increases significantly.
2. Future researchers are expected to add other research variables which are expected to have a greater effect on earnings. Because there are many other internal and external factors that can affect net income.
3. For the further development of management science, based on the results of the research above, it is clear that production costs and operational costs have an effect on profits. It is recommended to increase the number of years to be researched in order to strengthen the research results.

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Volume 24 (1) April 2017 ISSN 0216-423X

JABM
JOURNAL of ACCOUNTING - BUSINESS & MANAGEMENT

Journal of Accounting – Business & Management vol. 24 no. 1 (2017) 1-20

The Impact of Hidden Costs on Production and Operations

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Abstract

The paper is a conceptual research in hidden costs which are increasing important in the everchanging technology world. The worldwide manufacturing environment has evolved rapidly from only producing a narrow range of products to a wide range of customized products. While the world's attention is focused on the fight to increase productivity and develop new technologies to maintain manufacturing competitiveness, the change in this nature has called for a serious review of the existing cost management strategy and lead to intense focus on the less visible but every bit as critical to the cost incurred by the hidden factory of offline transactions. This paper identifies various elements and contributing factors of common hidden costs in production and associates the impact to the total product cost. Hidden costs cannot be eliminated completely but can be reduced. Hidden costs transform from one area to another and sometime they are essential parts of the manufacturing costs. This paper also discusses a case study on offshore outsourcing by using transactional cost analysis to reveal the additional hidden costs associated with the transaction where traditionally, people like to associate cost to physical units or activities, but not on the exchange of transaction. As the demand in hidden cost analysis increases, managers are aware that the existing cost system and direct allocation method is not capable to provide accurate cost information to help the cost reduction effort. Hence, classification of hidden costs and ability to transform them into visible cost becomes critical.

Keywords: hidden costs, production science.

I. INTRODUCTION

True cost and true price ensure a circular and inclusive economy that creates a visible value (Raynaud et al., 2016). Learning and recognition of hidden costs influence the organisation pricing decision and performance of the cost management (Nini & Zixian, 2014). Most of us probably have heard about the Titanic ship, the most modern, luxurious and complicated ship that was designed to be a marvel of modern safety technology and once; quoted as "unsinkable" by the press. But during her

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maiden voyage, the greatest maritime disaster in history began in a night of heroism, terror and tragedy where 1502 lives were lost. Captain Smith, captain on the ship was not able to detect the disastrous huge iceberg hidden underneath the sea and undermine the impact of the iceberg by looking only at the tip of the iceberg in an unusually calm and flat, "like glass" sea. Let's look back to the industry, isn't this history a good illustration of what is hidden cost in production and what will be the impact to the manufacturing competitiveness if managers do not take it seriously, or not aware about it.

While the world's attention is focused on the fight to increase productivity and develop new technologies, manufacturing managers today are quietly waging a different battle to conquer overhead costs. Larsen et al. (2013) identified that decision makers are more likely to make cost-estimation errors due to increasing configuration and complexity in offshore outsourcing. Miller and Vollmann (1985) indicate in their research that overhead costs rank behind only quality and getting new products out on schedule as a primary concern of manufacturing executives. Hidden costs are invisible costs associated to transactions that are carried out there by the people whose wages and salaries account for the total costs. But in the "hidden factory" where majority of manufacturing overhead costs accumulates, the real driving force comes from transactions, not physical products. Even in the offshore outsourcing, Qu and Brocklehurst (2003) argue that transaction costs are almost as significant as production costs. Hidden manufacturing overhead costs generally include equipment downtime, process setup time, rework, production scrap or waste whereas non hidden manufacturing overhead costs include labor turnover, absenteeism, mismatched compensation, managing corporate dishonesty, managing proprietary information, cost of quality, work injury.

Larsen et al. (2013) identified that decision makers are more likely to make cost-estimation errors due to increasing configuration and complexity in offshore outsourcing. Kaplan (1988) believe that most companies now recognize that their current cost system is only adequate to cover narrow range of products where cost of direct labor and materials can be easily traced back to the products, so distortion on using burden rate and direct labor allocation is minimal. But today where direct labor now represents a minor fraction of total cost and other overhead costs have exploded and grown significantly, the simplistic approach in categorizing and direct labor cost allocation is no longer providing accurate manufacturing information. Copper and Kaplan (1988) have developed an alternative costing method called Activity Based Costing (ABC) to respond to the deficiency of the conventional system and paint a right picture of the product cost.

1.1. Research Problem

Frick et al. (2013) analyzed that team work and performance linked pay on productivity, accidents and absence rates can create hidden cost manufacturing and do not necessarily increase worker productivity. As companies face up to the challenge of restoring manufacturing competitiveness, they usually turn their attention first to reducing the costs of the visible operations on the floor of the factories but neglecting less immediately visible but every bit as critical on overhead costs incurred by the "hidden factory" of off-line transactions. Managers had the perception that collecting such details on hidden cost does not pass a subjective cost benefits test because the costs are captured under others cost and will not be misstated in the final financial and tax statement, however the cost variance are likely to distort the major financial and

investment decision making in business world. Many companies now also recognize that their cost systems are inadequate for today manufacturing competition. System designed mainly to value inventory for financial and tax statements are not giving managers the accurate and timely information they need to promote operating efficiencies and measure accurate product costs. In short, the research problems are summarized as followings:

a) Lack of awareness and understanding of hidden production cost and generally transactional cost analysis.
b) Cost systems are inadequate to provide information to maintain manufacturing competitiveness.

1.2. Objectives of The Research

The objectives of the research are:

a) To identify factors and elements of hidden production cost that unattended but critical to maintain manufacturing competitiveness.
b) To provide in depth understanding and focus on transactions which generate hidden costs by using transactional cost analysis on offshore outsourcing.
c) To suggest on how to improve the current cost system to provide more meaningful information to the managers.

II. SURVEY OF LITERATURE

The survey of literature covers the basic understanding of direct and overhead manufacturing cost and classification of visible and invisible (hidden) cost that contributes to the total product cost. It also includes the elements, contributing factors and consequences of hidden cost in the production. The survey has been divides into a few categories such as hidden production cost elements and factors, transaction cost analysis and impact and cost management and system.

2.1. Hidden Production Cost Elements and Factors - General Information

Betancourt et al. (2016) found that online channels can separate costs of production, distribution and consumption of all distribution services across space and time leading to minimisation of hidden costs which plays an essential role in the sustainability of online channels. Miller and Vollmann (1985) stated that as companies faced up to the challenges of restoring manufacturing competitiveness, traditionally they turn their attention first to reduce the costs of the visible operations on the floor of their plants and factories. Generally, they are three approaches to manage the cost more effectively, firstly is analyzing which transactions are necessary and improving the methods used to carry them out, secondly increasing the stability of operations and thirdly relying on automation and system integration. However, automation and system integration must be selectively applied and not to cause any adverse effect. This paper has provided details explanation on how explosive growth of overhead costs is impacting company manufacturing competitiveness and what approaches can be applied to reduce the "hidden factory costs". This article only focus on logistic, balancing, changes and quality transaction, but these few are incomplete to provide an explanation to the total hidden costs in production. The explanation is too simplistic.

Azzi et al. (2014) conducted a multi-case study to understand how the holding cost parameter is currently computed by industrial managers and how much the difference between manual and automated/automatic warehousing systems impacts the definition of inventory cost structure. They found evidence that the kind of storage system adopted inside the factory can impact on the holding cost rate computation and

permit to derive important considerations. Yamashina and Kubo (2002) stated that one of the major manufacturing problems today is to reduce cost and maintain competitive advantages. In the industry, there are many programs introduced such as total productive maintenance (TPM), total quality management (TQM) and just-in-time (JIT). However, these companies discover that these activities do not necessarily guarantee cost reduction but worst case, manufacturing cost rises with the introduction of such activities, since each activity is not necessarily promoted with the finding a connection between its loss reduction and possible cost reduction. "Manufacturing cost deployment" is a powerful tool to identify production losses to reduce costs.

This method will focus on investigating various production losses and classifying them into casual losses and resultant losses, looking for the relationship among the losses and finding connection between various kinds of loss reduction, clarifying if the know how on each loss reduction is available and if not obtaining it if not available and lastly estimating the cost of reducing or eliminating each identified loss and putting priority to the loss items for the total cost reduction. This article is academic orientated without empirical study. The approach is not practical and very time consuming; most of the companies will find it hard to implement.

SEAM (social economy approach management) 4 leaf clover suggests that the interaction of the structurism (left leaf) and the behaviorism (right leaf) of the 4-leaf clover – within a company creates six families of potentially unhealthy social performance areas within the seventh arena of social economic spectacles. SEAM is therefore more interdisciplinary and incorporates these into accounting (hidden cost) and economic (hidden revenue) aspect of performance to reveal the elements that are hidden in the normal balance sheet reports available for decision making. The seven arena are working condition themes (WCT) of how jobs are designed vary by context, working organization frame (WOF) of how ideologies or idea system in play, 3C'sD (communication, coordination and cooperation dialogs) of how hidden cost accumulate from miscommunication, poor coordination and road block to cooperation, time rhythms (TR) of life script rhythm control, training cast of character (TC), strategic plots (SP) and social-economic spectacles (SES). SEAM suggest that the common hidden costs associated in an organization are mismatched compensation, downtime, rework, waste, opportunity cost and risk and understanding of surface and subsurface cost lead to an understanding of the root of the accounting problem. There are indicators of hidden cost identified on absenteeism, work injuries, staff turnover, quality defects and lower direct productivity. This model is simplistic and probably enough to explain on small business.

Leslie (2003) cites that the total cost of owning and managing storage varies greatly from company to company. IT administrators must weigh a number of factors such as customer needs and business applications when designing and implementing storage environments. An IT department that understands the hidden costs of unmanaged storage will most likely end up with a lower storage TCO. Many enterprises are not well aware that the unmanaged storage and excess storage capacity carry hidden cost in term of resources, infrastructures and physical spaces for both operational and administrative aspects. The hidden costs are not the costs of acquisition, but IT management and client/application downtime associated with expansion and reconfiguration. A critical piece of storage infrastructure planning revolves around optimizing a company's storage resources. Companies that understand the composition and drivers for storage costs and spend money to carefully plan an optimal storage environment can avoid downtime and thereby save money over time.

2.2. Hidden Production Cost Elements and Factors - Human Behavior

Von Siemens (2013) showed that intention-based reciprocity can explain reduced worker performance as a hidden cost of control if individuals differ in their propensity for reciprocity and preferences are private information. Not being controlled might then be considered to be kind, because not everybody reciprocates not being controlled with high effort. Similarly, Hinds (2000) state that technological company relies on employees to protect proprietary information from the clutches of competitors. In the effort to protect the company intellectual properties, few employees consider the affect of such constraints on employees' creativity. It is believed that firstly employees are less creative when they do not have adequate autonomy, secondly when employees absorb new information, it becomes integrated into their existing mental models and maybe difficult to differentiate from their existing knowledge. Thirdly, requesting employees to suppress information may strain their cognitive resources. For cost perspective, the study outlined in the paper suggests that there maybe hidden cost associated with asking employees to protect proprietary information. Without knowing it, organization may experience less creativity and innovation when they designate information as proprietary and restrict employees' ability to share information. This study provides an insight of hidden cost from constraining innovation and creativity and this is not visibly shown in the balance sheet but is visibly notice on the high turn over as employees are less motivated to generate new ideas. Their self satisfaction need is not satisfied. This article does not provide solution to manage company proprietary information, this is important knowing that managing proprietary information in a highly intellectual company is happening everywhere.

Cialdini et al. (2004) identified organizational dishonesty as a major reason for hidden costs than has been understood so far. They found that unethical practices vis-à-vis organizational stakeholders have far-reaching, negative internal repercussions. Such practices are difficult to trace and identify via typical accounting method. This article offers a new perspective in translating dishonesty in business practice to increased costs and this come in time with the recent major corporation unethical business fiasco. The author emphasizes more on negative consequences in external dealing, as a matter of fact, internal compliance to the business ethnic is also critical.

Prickett (2002) believes that the problem of labor turnover remain unresolved and over the years has taken on varied aspects and has attained a significant impact and which now calls for universal attention. Labor turnover is not only an industrial problem but it becomes a vast social threat. General separation has been classified as quits, discharges and lay-off and even these are not the same in nature, the cost associated to any form of separation is significant. The author believes that the causes of quits commonly given are wages, working conditions and perceived better opportunity, discharges are generally because of incompetency of one type or disciplinary reason due to insubordination, laziness and trouble making. Elements of costs associated to turnover are employment cost, training and instruction, waste due to unskillful operators, cost of decreased production and others like exit interview etc. The problem of labor turnover is a management responsibility; it resolves itself into two parts, one has to do internally with the improvement of working condition within organization and the others has to do with inter-industrial and social relations and is partly external. It is believed that the ideal of regular, continuous employment can be nearly realized if the problem is faced squarely by those who are in a position to promote its achievement. The costs of resources expansion and costs of labor turnover

is different and the differences are not being discussed sufficiently in this article. Many companies believe high turnover is equivalent to hiring more.

2.3. Hidden Production Cost Elements and Factors - Cost of Quality

Balafoutas et al. (2015) experimentally examine the impact of tax evasion attempts on the performance of credence goods markets and four that tax evasion attempts – independently of whether they are successful or not – lead to efficiency losses in the form of too low quality and less frequent trade.

He et al. (2016) quantified the hidden loss caused by quality deviations in manufacturing and uses it as a newly added constraint to optimise the burn-in time and systematically combine the fundamental loss of quality deviations in the optimisation of burn-in time, which supplements the commonly used optimality criteria, with the upstream loss of quality deviations in the form of manufacturing defects. Likewise, Venmans (2014) found that internal capital budgeting rules and studying of technical feasibility and profitability are relevant to understanding the barriers to the diffusion of energy efficiency measures.

Balafoutas et al. (2015) experimentally examine the impact of tax evasion attempts on the performance of credence goods markets and four that tax evasion attempts – independently of whether they are successful or not – lead to efficiency losses in the form of too low quality and less frequent trade. Moen (1998) reveals in his article that traditional approach of quality cost measurement is categorized into prevention, appraisal and failure (PAF-model) and mainly internally company focused and reactive by nature. Intangible and hidden cost of poor quality costs have been described as the most important one needed for management and can be accurately measured using the QFD (quality function deployment) matrix, intangible costs consists of customer dissatisfaction and loss of reputation cost. QFD matrix is not well recognized and accepted in the industry.

2.4. Hidden Production Cost Elements and Factors - Environmental Regulation

Wesseh and Lin (2015) found that while renewable energy may have inherent limitations such as seasonality of supply, low energy content and capacity factor issues, they still hold a significant amount of value which can only be detected when externalities are internalized, thus underscoring the need for external costs-related policies.

Satish et al. (2000) suggest that industry compliance with stringent environment regulation can significantly affect product costs in industries such as chemical, paper, steel and utilities. Brainerd and Menon (2014) explained in detail about the seasonal effects of water quality and the hidden costs of the green revolution to infant and child health leading to unhealthy conditions. Environmental regulations affect firms' costs in several ways which translates into visible and hidden costs, visible costs referred to costs such as installation and maintenance of pollution control equipment and pipe emission treatment, whereas hidden costs referred to costs incurred by imposing additional constraints on production technology or assembly process. Managers attempted to estimate and included all the environmental associated costs into the costing but find it difficult to isolate and measure the components. Managers had a perception that collecting such details does not pass a subjective cost benefit test because the costs are captured under other costs and will not be misstated, however the cost variance are likely to distort the major decision making such as pricing negotiation due to unclear cost categorization, product profitability analysis, plant shut down and major investment decision. Author does not provide plan or method to drive for

hidden costs avoidance or reduction, note that compliance cost is not able to be eliminated. Hence, sharing in reducing costs within the regulatory boundary is critical.

Morgenstern et al. (2001) cite that reported expenditures for environmental protection are often cited as assessment of the burden of current regulatory efforts and primarily based on information collected in the pollution abatement and control expenditure (PACE) survey conducted by the U.S. Bureau of the Census. However, the potential for both incidental savings and uncounted costs means that the actual burden could be either higher or lower than these reported values. Many previous analyses argue that reported environmental expenditures likely understate the true economic cost of environmental protection, however in contrast, the result of the article rule out any meaningful understatement on average and suggest, if anything, some degree of overstatement. Based on the analysis of four industries with high pollution expenditures, the authors estimate between $0.68 in uncounted saving and $0.14 in uncounted costs are associated with an incremental dollar of reported expenses.

2.5. Hidden Production Cost Elements and Factors - Downtime and Changes

Bell (2004) concluded that all assets in an industry are required to be within a certain limit of assets availability. The high prevalence of such ceiling covers the huge yet latent costs created by inadvertent downtime. Such costs account for 1-3% of revenue in heavy process industries. The cost of unplanned downtime can be categorized as lost of revenue where this is a typical result of demand exceeding supply, carrying excess capacity to address typical assets availability barriers and lastly disruption and recovery costs where cost associated with returning to normal business operations. With these three major elements of downtime being identified, a simple model can be developed to calculate the hidden cost based on amount of excess capacity available to recover lost revenue. Base on the examples provided in the article, the cost of unplanned downtime can be significant. However, if the availability ceiling can be broken, organization can achieve significant return. One proposed solution is to use predictive maintenance software which can identify emerging problems before they lead to unplanned downtime.

Brainerd and Menon (2014) explained in detail about the seasonal effects of fertilizers on water quality and the hidden costs of the Green Revolution to infant and child health leading to unhealthy conditions. Terwiesch and Yu (2001) suggest in their article that there is huge amount of hidden cost associated to process change in production ramp-up. Production ramp-up is the period of time during which a manufacturing process is scaled up from small laboratory-like environment to high volume manufacturing. During this scale up, the firm needs to overcome the numerous discrepancies between how the process is specified to operate as written in the recipe and how it actually operated at large volume. Most of the hidden cost come from area of changes where company need to further refine the current process recipe that lead to potential acquisition of new production equipment, upgrades of software and increase in automation as well as in the aspect of yield loss where carry major impact in process economic. Author fails to explain how copy exactly method can be applied across sites located at different geographical locations, different cultural value and background. The level of copy exactly is also not discussed in this article.

Venkatesh (2004) mention in his article that TPM (total productive maintenance) is a maintenance program which involves a newly defined concept of maintaining plant and equipment. TPM is an innovative Japanese concept where the origin of TPM can be traced back to 1951 when preventive maintenance was first introduced in Japan. The

goal of TPM program is to markedly increase production, at the same time, increasing employee mobile and job satisfaction. The 7 famous pillars of TPM are Autonomous Maintenance, Kaizen, planned maintenance, quality management, training, office TPM and Safety, Health and Environment. TPM brings maintenance into focus as a necessary and vitally important part of the business, it is no longer regards as a non-profit activity. Downtime for maintenance is scheduled as a part of the manufacturing say and in some cases, as an integral part of the manufacturing process and the goal is to hold emergency and unscheduled maintenance to a minimum. One of the important TPM pillar is Kaizen which pursue efficient equipment, operator and material and energy utilization, that is extremes of productivity and aims at achieving substantial effects through eliminating of 16 major losses in organization. The 16 major losses are categorized in losses that impede equipment efficiency, human work efficiency and effective use of production resources. It is believed that TPM can be adapted to work not only in industrial plants, but in construction, building maintenance and variety of industry.

This article only articulates the benefits of the program but short in providing information on implementation as well as timeline to implement. This paper is also not providing information on what are the criteria that organization must equip with prior implementation.

2.6. An Introduction to Cost Management and System

Kaplan (1988) stated that many companies are not aware that their company cost system are designed to value inventory for financial and tax statement and not providing managers the accurate and timely information they need to promote operating efficiencies and measure product costs. Generally, cost designers have failed to recognize that their systems need to address not only inventory valuation for financial and tax statements, but also allocating periodic production costs between good sold and goods in stocks as well as operational control in providing feedback to production on resources consumed (labor, materials, energy and overhead) during operational period. Inventory valuation systems divide labor, materials and factory overhead, most companies continue to use direct labor to allocate overhead even the direct labor maybe insignificant of total manufacturing cost.

Copper and Kaplan (1998) mention that managers in companies selling multiple products are making important decisions about pricing, product mix and process technology based on distorted cost information. In this article, the authors present an alternative approach, which refer as activity-based costing. The theory behind is to include virtually all of the company's activity exist to support the production and delivery of good services in the product costs. It is believed that an activity-based costing can paint a picture of product costs radically different from data generated by traditional system and these differences arise because of the system's more sophisticated approach to attributing factory overhead, corporate overhead, and others organizational resources, first to activities and then to the products that create demand for these indirect resources.

2.7. Transaction Cost Analysis and Impact

Qu and Brocklehurst (2003) use a transaction cost theory in this paper to conclude that transaction costs are almost as significant as production costs when it comes to offshore outsourcing. This paper outline an analysis of the role of transaction costs in supplier selection of offshore outsourcing between China and India. Transaction cost theory, which was pioneered by Coase (1937) and developed

principally by Williamson (1975) is based on assumption that human beings are utility maximizers and firms are profit maximizers. In pursuit of these objectives, agents are rational and sometimes display opportunistic behavior. All the literatures on transaction costs theory related to manufacturing rather than services and that services may be quite different. This paper explain the decision made to balance the saving made in production costs (because a supplier can provide the good/services more cheaply) against the transaction costs that result from outsourcing. These costs include operational costs (e.g. search costs) and contractual costs (e.g. the costs of writing, monitoring and enforcing a contract). There are two important factors for transaction cost, first is from the perspective of the transaction participants, transaction costs exist on both the buyers and seller sides. Second, the transaction cost can be divided into three types, type 1 is cost is compulsory cost, are those costs that both buyers and sellers have to pay, type 2 is complementary cost that only one side need to pay and type 3 which is win-win or lose-lose, costs that both buyers and sellers would either save or pay. This paper has demonstrated that transaction costs assume a much greater importance relative to production costs for offshore outsourcing as compared to onshore cousin. Yet, the difficulty remains that transaction costs are not as transparent as production and often term as invisible or hidden. This article does not provide hidden cost analysis on outsource management but more to initial sites selection phase.

Barthelemy (2003) mentions the seven deadly sins of outsourcing. In his research, he cited that while outsourcing is a powerful tool to cut cost, improve performance, and refocus on core business, outsourcing initiatives often fall short of management's expectations. Through his survey, author concluded that there are seven common mistakes or errors that most of the customers made. These are choice of incorrect vendors, wrong choice of activities to outsource, ineffective contract writing, underestimating personnel matters, lack of control of the outsourced activity and lack of awareness about the hidden costs associated with outsourcing and lack of an exit strategy. The hidden costs of outsourcing are an important topic for managers because they can challenge the rationale of outsourcing. It is suggested that while considering all the potential impact of the hidden costs, it may be worth the additional costs of hiring outside expert to manage the business. This author generalizes the hidden cost of outsourcing management and did not provide details explanation and quantify the magnitude in his article. Using transaction cost analysis is a good method to quantify the magnitude of the impact.

III. RESEARCH METHODOLOGY

This is based on conceptual research. This topic provides a basic understanding on the elements and factors of hidden cost in production, impacts and the effect analysis. The information and data of the research were gathered from many sources including journal articles from magazines, websites and other publications.

Insert Figure 1 here.

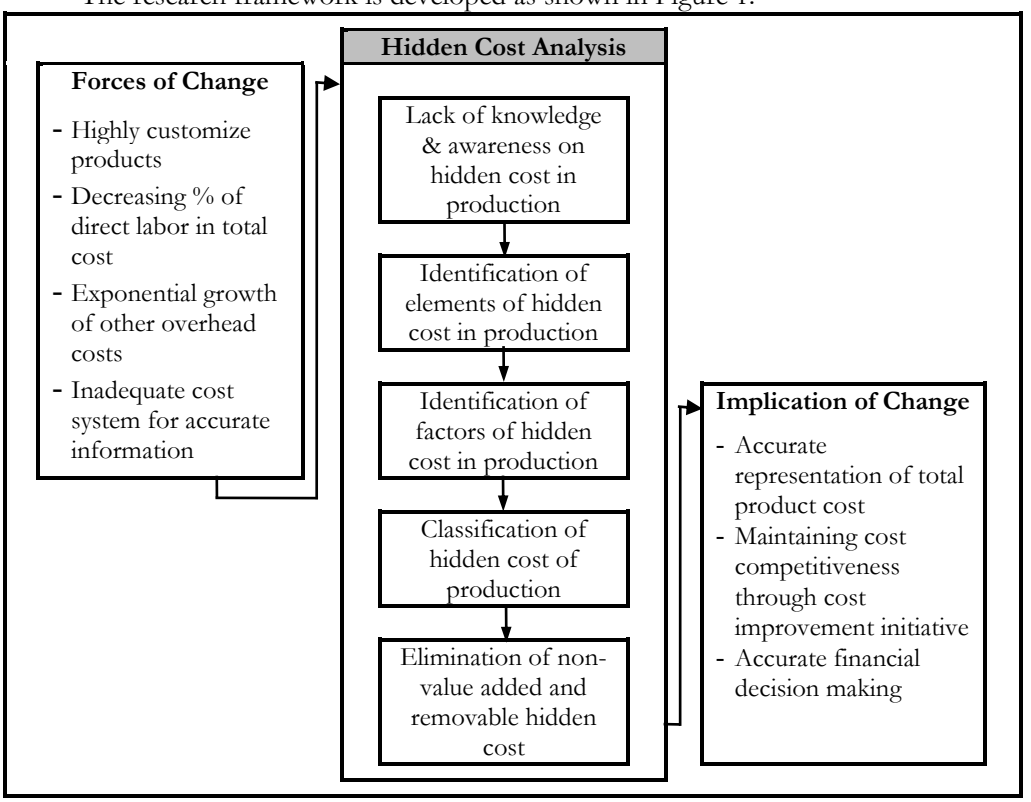
3.1. Discussion, Analysis and Finding

3.1.1. Factors and Elements of Hidden Cost in Production

Hidden costs or "invisible costs" are costs hidden in total product costs. It is undeniable that the world's attention is focused on the fight to reduce high manufacturing overhead costs. The indirect work now accounts for the lion's share of value added in most production based industries and in great dismay, most managers believe themselves to be poorly equipped to manage those costs. Hidden costs analysis become increasingly important as this portion of costs is often misstated and not

receiving the deserved attention. There is no clear definition of hidden costs in production; however hidden costs can be summarized as Figure 2 below.

The research framework is developed as shown in Figure 1:



Hidden costs can be summarized as Figure 2 below:

Factor	Element
Transaction	- Logistical - Balancing - Change - Quality - Vendor management
Conformance	- Conformance to environmental health regulation - Conformance to corporate policy of managing confidentiality
Social Process and Structure	- Labor turn over - Dishonesty - Communication - Rigid and bureaucratic management - Centralize decision making structure
Factory Shop Floor	- Costs of quality - Costs of rework/scrap/wastage - Cost of unplanned downtime - Cost of excessive IT storage

3.1.2. Transaction Cost Analysis - Significance

In economic and related discipline, a transaction cost is a cost incurred in making an economic exchange or transaction. Consider buying a product from the store; to purchase a product, your cost is not only the price of the product shown on the price tag itself, but also the energy and effort it requires to travel from your house and back, and the time waiting in the line, and the effort of the paying itself, and more if you spend time bargaining for the product; the costs above and beyond the cost of the product are the transaction cost. When we evaluate potential transaction rationally, it is important not to neglect transaction costs that proven significant.

In manufacturing sector, transaction cost is proven to be a significant part of the cost. Overhead costs do usually correlate with unit output, but does not mean that unit output "cause" overhead costs. Unit output drives direct labor and materials input on the actual shop floor that we all think of when we envision a factory. But, in the "hidden factory" where bulk of manufacturing overhead costs accumulates, the real driving force comes from transactions, not physical products (Miller & Vollmam, 1985). These transactions involve exchanges of material and/or information necessary to move production along but do not directly result in physical products. Therefore, it is important for managers to identify the basic types of transaction that are carried out there by the people whose wages and salaries account for the product cost.

In factory floor, basic types of transactions are logistical transactions, balancing transactions, quality transactions and change transactions:

a) **Logistical transactions**, which order, execute and confirm the movement of materials from one location to another location. These transactions are processed, tracked and analyzed by many of the indirect workers on the shop floor as well as by people in the receiving, expediting, shipping, data entry, data processing and accounting.
b) **Balancing transactions**, which ensure that suppliers of materials, labor and capacity are equal to the demand. The people involved in processing such transaction include purchasing, materials planning and production planning.
c) **Quality transactions**, which extend for beyond what we usually think of as quality control, indirect engineering and procurement to include the identification and communication of specifications, the certification that other transactions have taken place as they were supposed to, and the development and recording of relevant data.
d) Lastly **change transactions**, which update basic manufacturing information systems to accommodate changes in engineering design, schedules, routing, standards, material specifications and bills of material. Change transaction is often causing doing and undoing of the logistical, balancing and quality transactions and represents larger overhead cost in total.

3.1.3. Transaction Cost Analysis – Case Study on Outsourcing

Outsourcing is the process of subcontracting operations and support to an organization outside the company to replace the performance of the task with an organization's internal operations and it has become increasingly significant today. While it is viewed as a powerful tool to cut costs, improve performance and refocus on core business, management often overlook hidden costs that can seriously threaten the viability of outsourcing efforts. Zhonghua & Michael (2003) cite that the transaction costs are almost as significant as production cost when it comes to offshore outsourcing by using transaction cost analysis.

Transaction cost economics (TCE) suggests that two main types of outsourcing hidden costs:

a) Outsourcing vendor search and contracting costs. Search costs are the cost of gathering information to identify and assess suitable vendors. Contracting costs are the costs of negotiating and writing the outsourcing contract; both occur before the outsourcing operation actually takes place. From the perspective of the transaction participants, transaction costs exist on both the buyers and sellers sides.
b) Outsource vendor management costs. These costs can be divided into three types:
   (1) Type 1 costs, which are termed compulsory costs, are those costs that both buyers and sellers have to pay, for example communication labor costs for both sides, decision costs for buyers and special skill/knowledge-building costs for sellers
   (2) Type 2 costs, which are termed complementary costs, are those costs that one side pays and the other side saves, for example searching costs; if sellers pay for marketing and information publishing costs, its buyers will save their search costs.
   (3) Type 3 costs, which are termed as win-win or lose-lose costs, are those costs that both buyers and sellers would either pay or save, for example negotiating and monitoring costs. If the buyers and sellers trust each other both sides will save money, this is win-win. On the other hand, if buyers and sellers suspect each other then both sides need to pay more negotiating and monitoring costs. This is lose-lose.

The framework of the transaction costs involved in offshore outsourcing is shown as Figure 3 below:

Type of Cost	Outsourcer Side	Vendor Side
Compulsory	- Decision process - Integration and re-engineering - Contract writing - Communication	- Proving its delivery capacity - Proving delivery quality - Contract writing - Communication
Complementary	- Information searching - Communication - Transportation	- Marketing/Awareness - Reputation building - On site presence - Transportation
Win-Win or Lose-Lose	- Suspecting - Monitoring - Contracting - Regulating	- Proving - Responding to monitoring - Contracting - Government support

This case study has demonstrated that transaction costs assume a much greater importance relative to production costs for offshore outsourcing. Several outsourcing organizations are quite sure about the cost saving benefits of outsourcing. However, they are not always aware of the accompanying latent costs that can derail the outsourcing activity as a whole. Hidden cost exists even in outsourcing environment and this hidden cost management will remain as competitive advantages in future where everyone outsources their business. Whoever can perform better in controlling transaction cost and reduce hidden cost will achieve cost competitiveness.

3.1.4. Hidden Cost of Conformance

Many managers are not aware that conformance to stringent environmental regulations or corporate policies can significantly affect products costs in the industry.

3.1.4.1. Environmental Regulation

It is estimated that environmental protection expenditures comprise roughly 2% of GDP are often cited as assessment of the burden of currency regulatory efforts and a standard against which the associated benefits are measured (Morgenstern et al., 2001). However, little is known about how well these largely self-reported expenditures reflected the total cost increase that is associated with regulation. Environmental regulations affect firm costs in several ways. Typical accounting system easily identify, and hence separately capture and accumulates "visible" cost of environmental compliance, such as installation and maintenance of pollution-control equipment and end of pipe emission treatment costs. Most accounting system accumulates visible costs into environmental cost pools, separate from other overhead cost pools.

The total current costs are sum of visible costs and hidden costs. Hidden costs are those costs imposed on additional constraint on factory production technology. For example, the requirement in implementing lead free electronic product to the market has significantly increase cost of compliance from R & D, production, marketing etc. Accounting systems often fail to identify separately the incremental costs of such changes, and instead include them in the others cost pools. Regulation can also lead to external costs to society for which firms are currently not accountable, but which may become material in the long run, such as contingent environmental liabilities for toxic release etc. Environmental regulations can also increase general and administrative costs. For example, legal staff may be involved in regulatory activities such as applying permits, license and so on.

3.1.4.2. Protecting Proprietary Information

Another common area of conformance is protecting proprietary information in high tech company. Companies in the information industry often rely on employees to protect proprietary information from the clutches of competitors. In exhorting employees to protect proprietary information, employees consider the effect of such constraint on employees' creativity. There are several reasons to believe that employees may be less creative when asked to protect proprietary information. First, employees less creative when they do not have adequate autonomy especially intellectual group; employees are less motivated as they are not able to use some of the information that they hold. Second, when people absorb new information, it becomes integrated into their existing mental models and may be difficult to differentiate from their existing knowledge, hence employees are constraint and not able to make the most of the mind. Third, asking people to suppress information may strain their cognitive resources. The study by Hinds (2000) confirm the hypothesis that protecting proprietary information can inhibit idea generation and overall creativity and suggests that there may be hidden cost associated with asking employees to protect proprietary information. Without knowing it, organization may experience less creativity and innovation when they designate information as proprietary and restrict employees' ability to share information. Organization may want to consider these potential costs when assigning a value protecting proprietary information.

One common mistake that company always make is to overspend in the name of conformance. The cost structure is not carefully reviewed and status quo is not challenged and no innovation as no one would like to step up and taken accountability for any potential incident happens.

3.1.5. Hidden Cost of Social Process and Structure

There is a strong interconnection on social process and structure of an organization and there is a mutual casual relation between the structure/processes and

its embedded behavior and associated hidden cost. The common human behaviors affecting the costs are high labor turn over, employee dishonesty and poor communication. Meanwhile, the common structural problems organizations encountered are physical and organizational structure.

3.1.5.1. Labor Turnover

The problem of labor turnover remained unsolved. This problem is not new, but over the years has taken various aspects and has attained a significant impact which calls for universal serious attention. High turnover can be attributed to three main categories. They are resignations, discharges and lay-offs. The most common cause given for resignations are wages, working conditions and better opportunity elsewhere. Discharges are generally because of in competency of one type or other disciplinary reasons like insubordination, trouble making and laziness. Lay-offs are due to changes to manufacturing and business fluctuation conditions. Quits being the most prominent cause of turnover, with lay-off second and discharges last. Elements of costs must not only look upon as belonging not only to the period of accession but as extending over the training period. The costs of turnover, in any event, apply to replacements, and are costs necessary to bring the new employee up to the efficiency of the one whose place he is taking. The common costs are employments cost, interaction and training, breakage and waste, costs of decreased production and other costs like exit interview etc. Expanding the workforces incurred only employment costs but no turnover costs. The problem of labor turn over and associated hidden costs must not be undermined.

3.1.5.2. Organizational Dishonesty

Balafoutas et al. (2015) highlighted the efficiency losses evasion in the form of too low quality and less frequent trade, low marketing performance and additional costs to hide or uncover taxable transactions. All were due to tax evasion practices. Lackadaisical corporate governance practices have far-reaching harmful effect on the functioning of organisations than is usually acknowledged. The resulting damage can easily outweigh the short-term gains. Just look at what happen to recent business fiasco in US; Enron, Worldcom, Arther Anderson etc. Companies that deploy dishonest tactics typically do so as a means of increasing their short-term profits, and in that regard they might succeed. But, the misconduct is likely to fuel a set of social psychological processes with the potential for ruinous fiscal outcomes that can easily outweigh any short-term gains. In other words, organizations that behave unethically will find themselves heading down a slippery and dangerous fiscal path.

The second malignancy of dishonesty is mismatch between values of employees and organization. Employees with honest values tend to be unhappy in organisations that promote dishonest and unethical practices. They are understand constant stress due to the conflicting ethical values. It results in huge costs such as absenteeism, attrition, ill health, decreased job satisfaction and other effects. Honesty and ethics have to be demonstrated from the top, with senior executives setting the role model.

3.1.5.3. Structure

Organizational structures form a closed hierarchy to a networking organization. It is obvious that different structures promote or reduce operational efficiency. The most notorious structure practice in organization is bureaucratic system which is characterized by clearly defined hierarchy, manage from details rules and regulations and promote centralized decision making. The bureaucratic system often lead to attitude of bureaucratic to stick to the letter of the rules and procedures ignoring the spirit behind then or the purpose they are meant to serve and create social dysfunctions. The rigidity called "red tape" has often led to organizational efficiency.

The structure also often promotes or reduces rivalry. In a relatively hostile working environment, imagine the costs incurred due to miscommunication and poor coordination.

3.1.6. Hidden Cost of Factory Shop Floor

Most of the attention on the shop floor are mostly on reducing the costs of the visible operation on the floors of their plants and factories; mostly on the direct materials and direct labor costs, but the reality is all these importance – have long represented a decreasing percentage of the total value added by manufacturing. Cutting the explosive growth of overhead costs requires mastery of more than just what happens on the manufacturing lines. The most common hidden overhead costs are cost of quality, process changes, unplanned downtime, computerization and automation etc.

3.1.6.1. Cost of Quality

Moen (1998), recommended the necessity of a novel method to measure cost of quality as it was necessitated by the problems in studying and reporting the effects of quality enhancement efforts in a few Norwegian companies.

The cost of quality is the difference between the actual operating costs and what the operating costs would be if there were no failures in its systems and no mistakes by its staff (Bland et al, 1998). In other words, the costs of quality are "those costs that are incurred to prevent a shortfall in quality and a failure to meet customer requirements, as well as costs incurred when quality do in fact fail to meet customer requirements". Unwillingness of senior management to provide long term support was mainly due to their inability to estimate the benefits to the financial health of the organization as well as improvements in customer satisfaction and loyalty. In general, customers needs are not adequately addressed because the current paradigm in today organization.

Quality management has been increasingly significant; however many companies are still unaware of the negative consequences that coming along. The above mentioned hidden cost analysis is rather enlightening.

3.1.6.2. Process Change in Production Ramp Up

Production ramp up is the period of time during which a manufacturing process is scaled up from a small laboratory-like environment to high volume production. During this scale up, the firm needs to overcome the numerous discrepancies between how the process is specified to operate as written in the process recipe and how it actually is operated at large volume. The reduction of these discrepancies; a process that we will refer to as learning, will lead to improved production yield and higher outputs. This inter-temporal trade-off between learning to implement the current process recipe and the change of the process recipe itself in form of a dynamic optimization problem. An optimal policy of learning and process change which balance the long-term benefits of recipe modifications with the direct costs of change as well as the disruptive effect on knowledge accumulation is being derived. But, even if the modification come to zero financial cost, it can be desirable to delay their implementation because of "hidden costs of process change". The hidden costs appear in the forms of fluctuation in the product yield and outputs, resources to achieve a stable manufacturing boundary, learning curve and waste management etc. Industry practice of "COPY EXACTLY" is preferred for instant production ramp.

3.1.6.3. Planned Downtime

Total productive maintenance (TPM) is an innovative Japanese concept which introduces a total new maintenance concept. According to TPM concept, the greatest impact of equipment downtime is revenue loss due to low equipment utilization. The typical strategy to address this issue is to carry excess capacity; this will entail building a

plant slightly larger than necessary or carrying spare equipment to support the capacity. Another aspect is recovery costs associated with returning to normal operation. This could include overtime for emergency repair, spare parts, loss of product due to off-quality operation. Both solutions carry additional hidden costs.

Industry studies show that large complex assets typically achieve 85%-95% available and the non-availability is split evenly between planned and unplanned downtime. Planned downtime is a schedule maintenance where we evolved efforts from a reactive to a proactive method and use trained maintenance staff to perform planned maintenance. Unplanned downtime is breakdown and resulting in loss of capacity. TPM brings maintenance into focus as a necessary and vitally important part of the business. It is no longer regarded as a non-profit activity. Downtime or maintenance is scheduled as a part of the manufacturing day and, in some case, as an integral part of the manufacturing process.

3.1.6.4. Automation and Computerization

One of the most frequently discussed ways to reduce the overhead costs associated with the hidden cost is automation. Robots can have a role in sophisticated materials control systems that automate logistical transactions, lasers can read bar code and eliminate the need for data entry operators to record movement transactions manually; computer-aided-inspection (AOI) can help to reduce the costs of processing quality transactions.

Perhaps the most important means of automating transactions is using computer systems that are so well integrated that data need only be entered once. In virtually every large company, however there is still a massive redundancy of transactions due to the existence of subsystems that cannot "talk" or "communicate" to one another. These problems exist both within manufacturing and between manufacturing and other functions. Integrated systems offer more than efficiency; they can also improve accuracy. However, redundant transaction processing and record is not cost effective and carrying hidden costs of excessive storage capacity and IT resources.

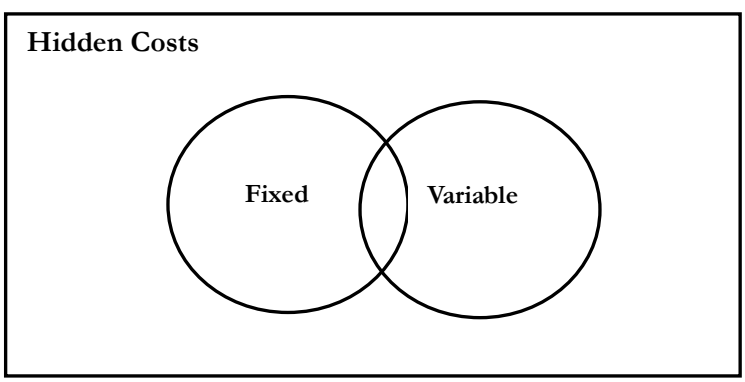
3.1.7. Classification and Behavior of Hidden Costs

Base on the research, it is suggested that hidden costs exists in all aspects and cannot be eliminated completely; like any form on energy conservation principle in physic, hidden costs transforms from one form to another form.

Hidden costs can be classified as:

a) **Fixed** - essential and indispensable due to multiple factors and hard to be eliminated.
b) **Variable** - costs that can be eliminated or replaced completely.

The relationship is illustrated in following Figure 4:



Fixed hidden costs are essential and indispensable; mostly refer to costs required due to policies and regulatory conformance. For instances, environmental capital investment and conformance to managing proprietary information belong to this category. Meanwhile, variable hidden costs are mostly inhered; this is the category that we will be able to invest effort in reducing or eliminating the hidden costs. According to the conservation principle, elimination is actually a transformation to another form and the significant part of it is the ability to transform to visible cost and provides an accurate representation of the actual costs structure. Most companies are taking serious attention in managing only direct material and labor as there are highly visible and easily identified. If we can classify the hidden costs and transform into visible costs, then we can take necessary efforts to battle this category of cost.

IV. RECOMMENDATIONS AND LIMITATIONS

4.1. Recommendations

The immediate challenge of hidden costs analysis and management is inadequacy of existing cost system. System designed mainly to value inventory for financial and tax statements to satisfy the board of director, shareholders and regulatory bodies. However, insufficient of accurate and timely management accounting information that the managers need to promote operating efficiencies and costs is not well recognized and adequately dealt with.

Betancourt et al. (2016) found that online channels can separate costs of production, distribution and consumption of all distribution services across space and time leading to minimization of hidden costs which plays an essential role in the sustainability of online channels. Activity based costing (ABC) provides a new costing approach to focus on activities as the fundamental cost objects. The costs of those activities become building blocks for compiling the indirect costs of products, services, and customers. ABC system makes more effort to allocate indirect costs to the products, services, or customers that caused those costs by separately estimating the indirect costs of each activities and then allocating those indirect costs based on what caused them. Each activity's indirect cost has its own and unique cost driver. Activities require more transaction are allocated more costs. Activity based costing is designed to provide more accurate information about production and support activities and products costs so that management can focus its attention on the products and processes with the most leverage for increasing profit. It helps managers to make better decision and encourages continual operating improvements. ABC is recommended in companies where producing wide range of products, highly complicated and customized and cost of overhead is high. By redefining the overhead cost structure into granular resolution, opportunity to identify, classify and transform the hidden costs to visible cost is high.

In our opinion, the future of digital world depicts astonishing growth. Knowledge economy is not going to expanded; but it is going to be exploded. In the context of disruptive technology, the way of doing business in manufacturing and services will be radically changing giving enormous room for the emergence of more hidden costs in the form of automation and robotics. Predictive and preventive measures are to be taken to curtail the presence of hidden cost by managing in an effective manner.

4.2. Limitations

Hidden cost analysis and management has not been getting the attention and focus that it deserved in today manufacturing environment. Most managers turn their

effort in reducing the highly visible costs but fail to understand the negative chain effect of hidden costs in the total product costs. The existing costing system has not able to provide accurate and impartial information to the managers. Companies are less interested as well as not knowledgeable on how to deal with the increasing significance of hidden costs. Very minimal empirical study on the elements of the hidden costs especially quantitative relationships of the hidden costs to the product costs. Managers can only learn the qualitative and behavior of the hidden costs.

Secondly, things broke down when it came to translating into action. Often, companies were looking for quick fix and neglected to follow an ABC initiative through to the end. Managers were reluctant to make efforts for collecting, analyzing and implementing fix as the effort is intense. Time is short and most companies cannot afford to take full advantages of the potential benefit of the hidden cost analysis.

V. CONCLUSIONS

Overhead costs grow explosively over the years in manufacturing environment where products range is wide, portfolio is highly customized and complex. This renewed trend calls for cutting the explosive growth of overhead costs requires mastery of more than just focus on reducing the costs of visible operation on the floor; less immediately visible but every bit as critical to the improvement of the overhead costs are the hidden costs. Managers today need to equip with good knowledge in managing the overhead elements especially identifying the "invisible or hidden" costs to maintain competitiveness. Without good understanding and knowledge of hidden costs factors and elements; the companies exposure to distorted costing information and high risk decision making. The story of world largest maritime disaster; Titanic will repeat in the same nature. Managers will be making distorted decision and redirect resources to the wrong aspects if they are not aware the impact and magnitude of the hidden costs; like the size of the ice-berg underneath the sea. Hence, the ability to focus in identifying the hidden costs, transforming to visible and implement plans to reduce the associated costs become a key to success in today.

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PENGARUH BIAYA PRODUKSI, BIAYA PROMOSI, DAN BIAYA DISTRIBUSI TERHADAP VOLUME PENJUALAN

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ABSTRAK

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh biaya produksi, biaya promosi, dan biaya distribusi terhadap volume penjualan Laba merupakan salah satu tolok ukur dari keberhasilan perusahaan. Peningkatan penjualan tidak terlepas dari indikator-indikator yang mendukungnya diantaranya pengeluaran biaya produksi, biaya promosi, dan biaya distribusi yang diharapkan dapat memberikan sumbangan terhadap pembentukan laba perusahaan.Penelitian ini merupakan penelitian kuantitatif dengan menggunakan pendekatan studi kasus dan lapangan.Populasi dalam penelitian ini adalah laporan keuangan perusahaan manufaktur. Adapun sampel dalam penelitian ini adalah laporan bulanan yang berupa biaya produksi, biaya promosi, biaya distribusi, dan volume penjualan tahun 2010-2017 yaitu berjumlah 48 sampel. Teknik analisis data yang digunakan dalam penelitian ini adalah teknik analisis regresi berganda. Hasil dari pengujian hipotesis di dalam penelitian ini menunjukkan bahwa biaya produksi, biaya promosi, biaya distribusi secara parsial berpengaruh positif dan signifikan terhadap volume penjualan.
Kata kunci: Biaya Produksi, Biaya Promosi, Biaya Distribusi, Volume Penjualan.

ABSTRACT

The purpose of this study was to determine the effect of production costs, promotional costs, and distribution costs on sales volume of profit is one of the benchmarks of the success of the company. The increase in profit is inseparable from the indicators that support it, including production costs, promotion costs, distribution costs and sales volumes that are expected to contribute to the formation of corporate profits. This research is a quantitative research using a case study and field approach. The population in this study is the financial statements of manufacturing companies. The sample in this study is a monthly report in the form of production costs, promotional costs, distribution costs, and sales volume in 2010-2017, which amounted to 48 samples. Data analysis techniques used in this study are multiple regression analysis techniques. The results of testing the hypothesis in this study indicate that production costs, promotional costs, distribution costs partially have a positive and significant effect on sales volume.
Keywords: *Production Costs, Promotion Costs, Distribution Costs, Sales Volume*.

PENDAHULUAN

Penjualan merupakan salah satu fungsi pemasaran yang sangat penting dan menentukan bagi perusahan dalam mencapai sebuah tujuan perusahan yaitu memperoleh laba untuk menjaga kelangsungan hidup perusahaan Menurut Sunyoto (2012:29) penjualan adalah orientasi manajemen yang menganggap konsumen akan melakukan atau tidak melakukan pembelian produk-produk perusahaan didasarkan atas pertimbangan usaha-usaha nyata yang dilakukan untuk menggugah atau mendorongminat akan produk tersebut.

Volume penjualan dikemukakan oleh Freddy Rangkuti (2009 : 207) bahwa volume penjualan adalah pencapaian yang dinyatakan secara kuantitatif dari segi fisik atau volume atau unit suatu produk. Volume penjualan adalah hasil yang dicapai oleh perusahaan atau instansi dari waktu ke waktu pada umunya tetap, tetapi selalu turun naik.

Setiap perusahaan memiliki strategi pemasaran yang berbeda-beda, tergantung dari kebutuhan setiap perusahaan. Strategi pemasaran juga disesuaikan dengan kemampuan dana perusahaan melalui kombinasi dari empat variabel yang merupakan inti dari sistem pemasaran yaitu produk, struktur harga, kegiatan promosi, dan sistem distribusi (Swastha dan Irawan,2008:10). Kebijakan perusahaan mengenai kegiatan promosi akan sangat menentukan seberapa besar volum penjualan yang dapat diperoleh perusahaan. Hal tersebut dikarenakan apabila perusahaan memiliki produk yang berkualitas dengan harga yang terjangkau serta sistem distribusi yang baik namun tidak mampu memperkenalkan produk secara luas dan merata, maka produk yang dihasilkan tidak akan memiliki nilai. Produk, harga, promosi dan distribusi merupakan variabel-variabel yang dapat mempengaruhi dan mendorong konsumen untuk menggunakan produk yang ditawarkan.

Promosi dilakukan dengan tujuan untuk memperkenalkan produk dari perusahaan kepada konsumen atau masyarakat, dengan cara menjelaskan karakteristik produk tersebut, mengenai kegunaan, dan juga kelebihan – kelebihannya, sehingga mampu menarik minat konsumen untuk memiliki atau membelinya. Biaya Promosi merupakan sejumlah dana yang dikeluarkan perusahaan kedalam promosi untuk meningkatkan penjualan (Henry Simamora dalam Tryusnita, 2009). Besarnya biaya promosi yang ditetapkan oleh perusahaan untuk memasarkan produk, berpengaruh terhadap perkembangan pemasaran. Pemasaran tidak hanya bertujuan untuk menjual barang dan jasa saja,tetapi juga untuk mengetahui keinginan dan kebutuhan konsumen (pasar). Naik turunnya volume penjualan akan berpengaruh terhadap perkembangan dan kelangsungan hidup produk yang dipasarkan.

Kompleksnya masalah promosi dalam suatu perusahaan, betapa pentingnya sistem dan strategi yang tepat dalam menyampaikan pesan kepada konsumennya dengan melalui media promosi yang biasanya menggunakan salah satu atau kombinasi dari variabel - variabel promosi.Sudah pasti suatu perusahaan ingin selalu meningkatkan jumlah penjualannya untuk mendapatkan laba yang lebih besar, dan kita melihat betapa berperannya promosi dalam upaya untuk dapat mencapai tujuan perusahaan yaitu peningkatan volume penjualan. Disamping faktor promosi faktor lain yang tidak kalah pentingnya adalah saluran distribusi.

Biaya distribusi menurut Ardiyoso (2007) dalam Kamus Besar Akuntansi adalah Biaya yang terjadi guna memasarkan atau mengirimkan suatu produk. Biaya yang dapat digolongkan ke dalam *distribution cost* adalah biaya untuk fasilitas. Saluran distribusi harus dilaksanakan dengan tepat dan teratur, sehingga dapat diharapkan produk-produk yang dihasilkan dapat terjual sebanyak mungkin sehingga produknya dapat bersaing dalam pasar dengan produk pesaingnya.Saluran distribusi adalah perantara-perantara, para pembeli dan penjual yang dilalui oleh perpindahan baik fisik maupun perpindahan milik sejak dari produsen hingga ke tangan konsumen.

Perusahaan yang mendistribusikan barangnya dapat menggunakan salah satu atau lebih dari cara penyalurannya. Dalam menentukan saluran distribusi perusahaan harus mempertimbangkan masalah harga, produk juga promosi yang dilakukan.Oleh karena itu saluran distribusi sepertinya mudah, tetapi dalam pelaksanaannya tidaklah semudah yang dibayangkan, sebab menyangkut tugas dan tanggung jawab yang tidak ringan.Kepuasan pelanggan merupakan salah satu tujuan penting ketika kita menjalankan suatu bisnis.Sebuah pelayanan yang berkualitas ke konsumen merupakan salah satu prinsip penting yang harus diketahui. Hal ini dikarenakan konsumen akan datang kembali jika konsumen tersebut merasa puas atas layanan yang sudah diberikan penjual. Ketika konsumen datang kembali maka konsumen tersebut adalah konsumen yang

setia dan tentu saja akan meningkatkan penjualan dalam jangka panjang. Konsumen akan datang kembali jika konsumen tersebut puas. Kepuasan konsumen akan sangat ditentukan oleh kualitas layanan dan kualitas produk kita. Harapan dari terbentuknya kepuasan pelanggan tidak hanya meningkatkan penjualan, melainkan juga nantinya diharapkan para konsumen merekomendasikan produk kita ke orang lain. Setiap usaha dalam menjalankan bisnisnya mempunyai tujuan untuk tetap dapat hidup dan berkembang.Tujuan tersebut hanya dapat dipakai melalui usaha mempertimbangkan dan meningkatkan laba atau keuntungan usaha.Ini hanya dapat dilakukan apabila usaha dapat mempertahankan dan meningkatkan penjualannya.

Selain biaya promosi dan biaya distribusi, biaya lain yang tidak kalah pentingnya dalam mempengaruhi besar kecilnya laba yang diperoleh adalah biaya produksi. Produksi adalah kegiatan dimana suatu perusahaan memproses dan merubah bahan baku menjadi barang jadi melalui penggunaan tenaga kerja dan fasilitas produk lainnya. Dapat dikatakan bahwa biaya produksi adalah biaya yang berasal dari penyediaan bahan baku sampai biaya yang dikeluarkan untuk memproduksi bahan baku sehingga menjadi barang jadi yang siap untuk dijual (Kusumah, 2009).Biaya dan pendapatan merupakan faktor yang sangat penting dalam setiap perusahaan, baik ituperusahaan yang bergerak dibidang jasa maupun perusahaan manufaktur, dan perhitungannya harus dilakukan secara efisiendan seefektif mungkin (Rahmawati et.al, 2014). Pengelolaanbiaya produksi yang kurang baik mengakibatkan turunnya pendapatan yang diterima. Penggunaan bahan baku yang berkualitasbaik akan menghasilkan produk yang baik pula (Prihandoko, 2016). Pengembangan produk yang bervariasi dengan kualitas yang memadai, dapat merangsang minat konsumen untuk membeli sehingga diharapkan dapat meningkatkan volume penjualan.

Perusahaan manufaktur merupakan perusahaan yang melakukan kegiatanproduksi untuk mengelola bahan baku menjadi produk jadi.Pengendalian biaya merupakan salah satu faktor penting dalam efektivitas perusahaan, serta diperlukan pengendalian dan pengawasan terhadap biaya-biaya yang dikeluarkan. Oleh karena itu, biaya produksi, biaya distribusi dan biaya promosi yang akan dikeluarkan oleh perusahaan merupakan salah satu faktor biaya yang penting yang harus *diperhitungkan.*

KAJIAN PUSTAKA

Penjualan

Penjualan merupakan salah satu fungsi pemasaran yang sangat penting dan menentukan bagi perusahan dalam mencapai sebuah tujuan perusahan yaitu memperoleh laba untuk menjaga kelangsungan hidup perusahaan Menurut Sunyoto (2012:29) penjualan adalah orientasi manajemen yang menganggap konsumen akan melakukan atau tidak melakukan pembelian produk-produk perusahaan didasarkan atas pertimbangan usaha-usaha nyata yang dilakukan untuk menggugah atau mendorong minat akan produk tersebut.

Volume penjualan dikemukakan oleh Freddy Rangkuti (2009 :207) bahwa volume penjualan adalah pencapaian yang dinyatakan secara kuantitatif dari segi fisik atau volume atau unit suatu produk. Volume penjualan meruapakan jumlah total yang dihasilkan dari kegiatan penjualan barang. Semakin besar jumlah penjualan yang dihasilkan perusahaan, semakin besar kemungkinan laba yang akan dihasilkan perusahaan. Oleh karena itu volume penjualan merupakan salah satu hal penting yang harus dievaluasi untuk kemungkinan perusahaan agar tidak rugi.Jadi volume penjualan yang menguntungkan harus menjadi tujuan utama perusahaan dan bukannya untuk kepentingan volume penjualan itu sendiri.

Terdapat beberapa indikator dari volume penjualan yang dikutip dari Philip Kotler oleh Basu Swastha (2008 : 404) yaitu :

1. Mencapai volume penjualan
2. Mendapatkan laba
3. Menunjang pertumbuhan perusahaan

Dari definisi di atas dapat ditarik kesimpulan bahwa volume penjualan adalah total penjualan yang dinilai dengan unit oleh perusahaan dalam periode tertentu untuk mencapai laba yang maksimal sehingga dapat menunjang pertumbuhan perusahaan.

Faktor Yang Mempengaruhi Volume Penjualan

Aktivitas penjualan banyak dipengaruhi oleh beberapa faktor yang dapat meningkatkan aktivitas perusahaan. Adapun faktor-faktor menurut Swastha dan Irawan (2008: 22) yang mempengaruhi penjualan sebagai berikut:

1. Produk
   Salah satu tugas dari manajemen penjualan adalah desain produk yaitu mereka yang diminta bertindak sebagai mata dari perusahaan dan secara konstan memberikan saran perbaikan yang diperlukan produk
2. Harga
   Merupakan jumlah uang yang harus dibayarkan konsumen untuk mendapatkan suatu produk guna memenuhi kebutuhannya. Penetapan harga suatu produk yang dihasilkan merupakan salah satu usaha produsen untuk menarik para konsumen tertarik membeli dalam jumlah yang lebih banyak.
3. Distribusi
   Merupakan penyaluran barang dari produsen kepada . Semakin luas pendistribusian maka akan mempengaruhi penjualan.
4. Promosi
   Merupakan kegiatan yang dilakukan perusahaan dengan tujuan utama menginformasikan, membujuk, mempengaruhi, dan mengingatkan konsumen agar tertarik untuk membeli produk yang dihasilkan.

Biaya Produksi

Produksi adalah kegiatan dimana suatu perusahaan memproses dan merubah bahan baku menjadi barang jadi melalui penggunaan tenaga kerjadan fasilitas produk lainnya. Dapat dikatakan bahwa biaya produksi adalah biaya yang berasal dari penyediaan bahan baku sampai biaya yang dikeluarkan untuk memproduksi bahan baku sehingga menjadi barang jadi yang siap untuk dijual (Kusumah, 2009).

Biaya produksi juga dapat digunakan sebagai alat untuk meningkatkan profitabilitas yang diupayakan oleh perusahaan (Rahmawati et.al, 2014). Biaya produksi tersebut menjadi penentu besarnya harga jual dari produk atau jasa yang nantinya akan mempengaruhi besarnya laba yang di peroleh (Djamalu, 2013).

Proses produksi suatu perusahaan dapat ditentukan berdasarkan metode harga pokok pesanan (*job order cost method*) dan harga pokok proses (*process cost method*)

1) Metode Harga Pokok Pesanan (*Job Order Cost Method*)
   Metode harga pokok pesanan dapat dilakukan apabilaperusahaanmendapatkan pesanan akan suatu produk dari pihak luar. Metode harga pokok pesanan menurut Bastian Bustami dan Nurlela (2009, hal. 61) adalah :“Perhitungan biaya berdasarkan pesanan adalah suatu system akuntansi yang menelusuri biaya pada unit individual atau pekerjaan, kontrak, tumpukan produk atau pesanan pelanggan yang spesifik.”
2) Metode Harga Pokok Proses (*Process Cost Method*)
   Metode harga pokok proses dilakukan hanya untuk memenuhi persediaan barang yang ada di gudang dan produksi suatu produkdilaksanakan dalam kuantitas tertentu tergantung dari

kebijakan perusahaan. Menurut Bastian Bustami dan Nurlela (2009, hal. 91) metode harga pokok proses adalah :

"Penentuan biaya proses adalah suatu metode dimana bahan baku, tenaga kerja, dan overhead pabrik dibebankan ke biaya atau departemen.Biaya yang dibebankan ke setiap unit produk yang dihasilkan ditentukan dengan membagi total biaya yang dibebankan ke pusat biaya yang bersangkutan."

Mulyadi (2009) perusahaan yang proses produksinya secara massa memiliki karakteristik sebagai berikut:

a. Produk yang dihasilkan merupakan produk standar
b. Produk yang dihasilkan dari bulan ke bulan adalah sama
c. Kegiatan produksi dimulai dengan diterbitkannya perintah produksi yang berisi rencana produksi produk standar untuk jangka waktu tertentu.

Berdasarkan pengertian di atas, terlihat bahwa metode harga pokok proses produksi suatu perusahaan dapat ditentukan berdasarkan metode harga pokok pesanan (*job order cost method*) dan harga pokok proses (*process cost method*)

Biaya Promosi

Suatu produk bagaimanapun bermanfaatnya jika tidak dikenal konsumen maka produk tersebut tidak akan diketahui dan bermanfaat bagi konsumen. Oleh karena itu perusahaan harus melakukan cara agar konsumen dapat mengetahui produk perusahaan tersebut. Serta berusaha mempengaruhi konsumen untuk dapat menciptakan permintaan atas produk tersebut, kemudian dipelihara dan dikembangkan. Babin (2011: 27) Promosi merupakan fungsi komunikasi dari perusahaan yang bertanggung jawab menginformasikan dan membujuk/mengajak pembeli.Swastha dan Irawan (2008) mengatakan, promosi sebagai arus informasi atau persuasi satu arah yang dibuat untuk mengarahkan seseorang atau organisasi kepada tindakan yang menciptakan permintaan.Untuk mencapai tujuan tersebut perlu diketahui bentuk-bentuk promosi yang efektif serta terkait dengan komunikasi yang baik di antara bentuk-bentuk promosi yang ada yang lebih dikenal promotion mix.

Biaya Promosi merupakan sejumlah dana yang dikeluarkan perusahaan ke dalam promosi untuk meningkatkan penjualan (Henry Simamora dalam Tryusnita, 2009). Besarnya biaya promosi akanmempengaruhi volume penjualan perusahaan. Biaya promosi merupakan pengorbanan perusahaan dalam rangka mengkonsumsikan informasi dari penjual kepada pembeli yang bertujuan untuk merubah sikap dan tingkah laku pembeli, yang tadinyatidak mengenal menjadi pembelidan tetap mengingat produk perusahaan.Biaya promosi tersebut ditujukan untuk menunjang kelancaran perusahaan dalam upaya meningkatkan volume penjualan guna mendapatkan laba yang lebih tinggi (Hermono et. al, 2012). Hal ini diperkuat oleh penyataan Alma (2009:157), pada umumnya apabila dana bertambah untuk kegiatan pemasaran maka jumlah penjualan meningkat. Dengan adanya peningkatan penjualan, laba yang diperoleh perusahaan juga akan meningkat.

Biaya Distribusi

Distribusi (*place*) merupakan salah satu dari elemen marketing mix.Saluran distribusi adalah saluran yang dipakai produsen untuk menyalurkan barang hasil produksinya kepada konsumen, baik berpindahnya hak (penguasaan) hingga pemindahan barang maupun hanya pemindahan kepemilikan (Daryanto, 2013:100).

Menurut Widnyana et.al (2014) biaya distribusi merupakan biaya-biaya yang dikeluarkan oleh perusahaan untuk memasarkan barang atau penyampaian barang ke pasar.Menurut Tjiptono dan Chandra (2012:411-413) pemilihan saluran distribusi harus mempertimbangkan hal-hal sebagai berikut:

1) Postponement speculation theory

Teori ini mendasarkan pemilihan saluran distribusi pada risiko ketidakpastian dan

biaya yang timbul dalam transaksi. Focus utamanya adalah efisiensi saluran distribusi dan spekulasiberupaya mengatasi risiko dengan cara mengubah bentuk dan aliran perpindahan produk di dalam saluran distribusi,

2) Goods approach
Teori ini menyatakan karakteristik produk merupakan penentu utama metode distribusi yang tepat dan ekonomis

3) Financial approach
Ditentukan oleh sumber daya finansial dan kebutuhan akandstribusi produk.

4) Pertimbangan lain
Hal lain yang harus diperhitungkan adalah perkembangan teknologi, faktor social dan standar etika, regulasi pemerintah, tipologi, dan budaya.

HIPOTESIS PENELITIAN

1. Pengaruh biaya produksi terhadap volume penjualan
Faktor-faktor yang mempengaruhi volume penjualan diantaranya biaya produksi, semakin tinggi biaya produksi maka semakin tinggi pula volume panjualan. Hal ini disebabkan semakin banyaknya volume penjualan yang dilakukan perusahaan akan meningkatkan biaya produksi. Wijaya (2013), Martana et,al (2015), Syukriasi (2016) menyatakan bahwa biaya produksi berpengaruh positif signifikan terhadap volume penjualan. Namun Arizona (2006) menyatakan bahwa semakin tinggi biaya produksi, maka semakin rendah volume penjualan yang berarti bahwa biaya produksi berpengaruh negatif terhadap volume penjualan. Berdasarkan inkonsistensi penelitian tersebut, maka hipotesis yang dikemukakan adalah
H1 : Biaya produksi berpengaruh positif terhadap volume penjualan.

2. Pengaruh biaya promosi terhadap volume penjualan
Tingginya biaya promosi akan meningkatkan volume panjualan, yang berarti bahwa semakin banyaknya promosi yang dilakukan perusahaan atas produknya maka akan semakin tinggi pula jumlah penjualan atas produk tersebut. Hal ini didukung oleh (Wijaya, 2013), (Hermono, 2012), Kurniadi (2014), (Syukriadi, 2016). Namun Kendy (2016) yang menyatakan bahwa promosi memiliki pengaruh negatif dan tidak signifikan terhadap volume penjualan, atau dapat dikatakan bahwa biaya promosi tidak mempengaruhi volume penjualan. Mariatun (2017) berpendapat bahwa biaya promosi berpengaruh negatif terhadap volume penjualan.
H2: Biaya promosi berpengaruh positif terhadap volume penjualan.

3. Pengaruh biaya distribusi terhadap volume penjualan
Biaya distribusi adalah biaya yang dikeluarkan oleh perusahaan dalam hal menyalurkan barang dari produsen ke konsumen. Semakin tinggi biaya distribusi menandakan bahwa semakin tinggi pula volume penjualan, hal ini didukung oleh Hermono (2012), Kurnoadi (2014), Syukriadi (2016), Rahman &Yuningsih (2016). Khulud & Arifin (2016) menyatakan bahwa biaya distribusi tidak berpengaruh terhadap volume penjualan eksport. Berdasarkan inkonsistensi penelitian maka dapat dibuat hipotesis
H3: Biaya distribusi berpengaruh terhadap volume penjualan.

4. Pengaruh biaya produksi, biaya promosi dan biaya distribusi terhadap volume penjualan
Volume penjualan dapat dipengaruhi oleh kegiatan produksi, promosi dan distribusi secara bersama-sama atau secara simultan. Artinya biaya-biaya tersebut memiliki hubungan dengan volume penjualan, tergambar dalam laporan laba rugi perusahaan dimana volume penjualan merupakan pendapatan perusahaan dan biaya merupakan pengeluaran perusahaan.

Sehingga penjualan dan biaya saling mempengaruhi.

H4: Biaya produksi, biaya promosi dan biaya distribusi berpengaruh terhadap volume penjualan.

METODE PENELITIAN

Menurut Sugiyono (2008) populasi merupakan wilayah generalisasi yang terdiri atas subyek atau objek yang memiliki karakter & kualitas tertentu yang ditetapkan oleh seorang peneliti untuk dipelajari yang kemudian ditarik sebuah kesimpulan.Populasi dalam penelitian ini adalah perusahaan manufaktur sector konsumsi yang terdapat di Bursa Efek Indonesia Tahun 2010-2017. Data yang digunakan dalam penelitian merupakan data sekunder dan diambil dari laporan tahunan (*annual report*) perusahaan barang konsumsi yang terdaftar di Bursa Efek Indonesia (BEI) tahun 2010-2017. Dengan menggunakan teknik pengambilan sampel melalui putposive sampling didapat sampel pada tahun penelitian 2010-2017 sebanyak 6 perusahaan.

Adapun kriteria penentuan sampel yang digunakan dalam penelitian ini meliputi:

1. Data yang diambil merupakan laporan keuangan tahunan
2. Data yang diambil merupakan data yang sudah diaudit.
3. Data menyajikan komponen berupa biaya promosi dan biaya distribusi pada beban penjualan dan pemasaran, biaya produksi pada beban pokok penjualan dan penjualan bersih yang terdapat dalam Laporan keuangan Laba/Rugi.
4. Data yang diambil merupakan laporan periode 2010-2017 yang terdapat di BEI.

Definisi Operasional Penelitian

Menurut Sugiyono (2013) variabel penelitian adalah suatu atribut atau sifat atau nilai dari orang, obyek atau kegiatan yang mempunyai variasi tertentu yang ditetapkan oleh peneliti untuk dipelajari dan kemudian ditarik kesimpulannya.

Variabel Bebas (*Independent* Variabel)

Variabel independen merupakan variabel bebas, yang artinya variabel yang mempengaruhi atau yang menjadi sebab perubahan atau timbulnya variabel terikat (Sugiyono,2013: 39).

1. Biaya Produksi (X1) Menurut Mulyadi (2012:16), biaya produksi merupakan biaya-biaya yang dikeluarkan dalam pengelolaan bahan baku menjadi produk,yang digunakan untuk menghitung biaya produk jadi dan biaya produk yang pada akhir periode akuntansi masih dalam proses.
2. Biaya Promosi (X2) merupakan pengorbanan sumber ekonomi, yang diukur dalam satuan uang, yang terjadi atau kemungkinan akan terjadi untuk tujuan tertentu.Sehingga usaha yang dilakukan perusahaan untuk mempengaruhi konsumen untuk menyampaikan informasi tentang produk atau jasa agar para konsumen tertarik untuk membeli produk atau jasa yang ditawarkan.
3. Biaya Distribusi (X3) Menurut Widnyana et al (2014) biaya distribusi merupakan biaya-biaya yang dikeluarkan oleh perusahaan untuk memasarkan barang atau penyampaian barang ke pasar.

Variabel Terikat (*Dependent* Variabel)

Variabel dependent adalah variabel terikat, yang berarti variabel yang dipengaruhi atau yang menjadi akibat karen adanya variabel bebas (Sugiyono, 2013:39).Variabel dependent dalam penelitian ini adalah volume penjualan.Volume penjualan (Y) adalah keputusan konsumen dalam membeli suatu produk.

HASIL DAN PEMBAHASAN

Analisis Regresi Berganda

Tabel 1
Hasil Uji Regresi Linier Berganda

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	966.226	332.877		2.903	.006
	Biaya Produksi	1.382	.018	.917	75.298	.000
	Biaya Promosi	.078	.032	.027	2.408	.020
	Biaya Distribusi	7.273	.499	.176	14.581	.000

a. Dependent Variable: Volume Penjualan
(Sumber: Output SPSS 22)

Berdasarkan tabel 1 dapat disusun model persamaan regresi linier berganda berdasarkan kolom B. Model persamaan regresi linier berganda hasil penelitian adalah sebagai berikut:

$$Y = 966{,}226 + 0{,}917X_1 + 0{,}027X_2 + 0{,}176X_3$$

Model persamaan regresi linier berganda hasil analisis tersebut dapat diartikan sebagai berikut:

1. Nilai konstanta sebesar 966,226, artinya biaya produksi, biaya promosi, dan biaya distribusi bernilai 0, maka volume penjualan nilainya sebesar 966,226.
2. Variabel biaya produksi terdapat pengaruh terhadap volume penjualan yang berpola positif sehingga semakin bertambah nilai biaya produksi maka semakin besar nilai volume penjualan. Nilai koefisien biaya produksi sebesar 0,917 berarti bahwa setiap bertambah 1% maka akan meningkatkan volume penjualan sebesar 91,7%. Nilai signifikan sebesar 0,000 < 0,05 menunjukkan bahwa biaya produksi berpengaruh positif terhadap volume penjualan.
3. Variabel biaya promosi menunjukkan terdapat pengaruh terhadap volume penjualan yang berpola positif sehingga semakin bertambah nilai biaya promosi, maka semakin besar nilai volume penjualan. Nilai koefisien biaya promosi sebesar 0,027 berarti bahwa setiap bertambah 1% maka akan menambahi volume penjualan sebesar 2,7%. Nilai signifikan sebesar 0,020 < 0,05 menunjukkan bahwa biaya promosi berpengaruh positif terhadap volume penjualan.
4. Variabel biaya distribusi menunjukkan terdapat pengaruh terhadap volume penjualan yang berpola posiitif sehingga semakin bertambah nilai biaya distribusi maka semakin besar nilai volume penjualan. Nilai koefisien biaya distribusii sebesar 0,176 berarti bahwa setiap bertambah 1% maka akan meningkatkan volume penjualan sebesar 17,6%. Nilai signifikan sebesar 0,000 < 0,05 menunjukkan bahwa biaya distribusi berpengaruh positif terhadap volume penjualan.

Uji Koefisien Determinasi (R^2)

Koefisien determinasi (R^2) pada intinya mengukur seberapa jauh kemampuan model dalam menerangkan variabel dependen.

Tabel 2
Hasil Uji Koefisien Determinasi (Adjusted R^2)
Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. error of the Estimate
1	.997[a]	.995	.994	1614.033

a. Predictors: (Constant), Biaya Produksi Biaya Distribusi, Biaya Promosi
b. Dependent Variable: Volume Penjualan
Sumber: Output SPSS 22, data diolah 2018.

Hasil analisis regresi berganda dapat diketahui koefisien determinasi (R Square) adalah sebesar 0,995. Dari tabel 2, diketahui bahwa nilai RSquare sebesar 0,995, hal ini berarti bahwa 99,5% yang menunjukkan bahwa volume penjualan perusahaan dipengaruhi oleh variabel biaya produksi, biaya promosi, dan biaya distribusi. Sisanya sebesar 0,5% dipengaruhi oleh variabel lain yang belum diteliti dalam penelitian ini.

Uji Signifikansi Simultan (Uji-F)

Tabel 3
Hasil Uji Signifikansi Simultan (Uji-F)
ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20990940863.214	3	6996980287.738	2685.874	.000[b]
	Residual	114624556.786	44	2605103.563		
	Total	21105565420.000	47			

a. Dependent Variable: Volume Penjualan

b. Predictors: (Constant), Biaya Distribusi, Biaya Promosi, Biaya Produksi

Sumber: Output SPSS 22, data diolah 2018.

Berdasarkan tabel 3, hasil pengujian menunjukkan hasil F hitung sebesar 2685,874 dengan tingkat signifikansi 0,000 yang lebih kecil dari 0,05, dimana nilai F hitung (2685,874) lebih besar dari nilai F tabelnya sebesar 2,816 (df1=4-1=3 dan df2=48-3-1=44),maka hasil ini menunjukkan bahwa variabel biaya produksi, biaya promosi, dan biaya distribusi, secara bersama-sama berpengaruh terhadap volume penjualan.

KESIMPULAN DAN SARAN

Penelitian ini memiliki tujuan untuk mengetahui pengaruh tiga variabel independen yaitu biaya produksi, biaya promosi, dan biaya distribusi terhadap variabel dependen yaitu volume penjualan.Berdasarkan pada data yang dikumpulkan dan pengujian yang telah dilakukan maka dapat diambil kesimpulan sebagai berikut :

1. Biaya produksi berpengaruh positif dan signifikan terhadap volume penjualan.Tingkat laba yang diperoleh perusahaan dapat ditentukan oleh volume produksi yang dihasilkan. Biaya produksi yang besar mengindikasikan bahwa produk yang tersedia untuk dijual juga besar, sehingga volume penjualanakan meningkat.
2. Biaya promosi berpengaruh positif dan signifikan terhadap volume penjualan. Besarnya biaya promosi yang dikeluarkan perusahaan mengindikasikan bahwa perusahaan berhasil mengkomunikasikan produknya kepada masyarakat dan dapat menjangkau pasar yang telah ditargetkan, sehingga berdampak pada meningkatnyavolume penjualan.
3. Biaya distribusi berpengaruh positif dan signifikan terhadap volume penjualan. Besarnya biaya distribusi yang dikeluarkan perusahaan mengindikasikan bahwa produk tersalurkan dengan baik dan tersedianya produk di pasaran, sehingga produk dapat terjual sebanyak mungkin dan dapat meningkatkanvolume penjualan.
4. Biaya Produksi, Biaya Promosi, Biaya Distribusi secara bersama-sama berpengaruh positif dan signifikan terhadap Volume Penjualan. Temuan penelitian ini bermakna bahwa besar kecilnya ,biaya produksi, biaya promosi, dan biaya distribusi, secara bersama-sama (simultan) mempengaruhi secara positif volume penjualan. Apabila biaya produksi, biaya promosi, dan biaya distribusi semakin tinggi maka semakin tinggipula volume penjualan.Dan sebaliknya, apabila biaya produksi, biaya

promosi, dan biaya distribusi semakin kecil maka semakin rendah volume penjualan.

Saran

Berdasarkan hasil penelitian, pembahasan dan kesimpulan yang telah diambil di atas, maka dapat diberikan saran sebagai berikut:

1. Pada perusahaan manufaktur diharapkan untuk tetap mempertahankan efektivitas dan efisiensi pengendalian biaya (biaya produksi, biaya promosi, biaya distribusi) serta menigkatkan volume penjualannya karena terbukti membeir pengaruh positif terhadap volume penjualan.
2. Perusahaan diharapkan lebih memperhatikan besarnya volume penjualan yang diperoleh perusahaan dengan meningkatkan kualitas produk dan membuat produk yang dibutuhkan oleh masyarakat, agar volume penjualan yang diperoleh perusahaan maksimal.
3. Perusahaan harus lebih mengoptimalkan biaya promosi dan biaya distribusi karena memiliki hubungan yang positif dan signifikan terhadap volume penjualan, karena semakin besar biaya promosi dan biaya distribusi yang dikeluarkan perusahaan maka akan semakin besar pula volume penjualan yang disalurkan.
4. Untuk penelitian selanjutnya, sampel yang digunakan dapat ditambah sehingga untuk pengujian hipotesis dapat lebih akurat, dan menambahkan variabel serta jenis perusahaan yang berbeda mungkin akan memberikan hasil yang lebih baik.

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