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Measuring Inter-Industry Competitive Advantage and Performance of Lesotho's Export Sector

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ABSTRACT

The author investigated inter-industry competitive advantage and performance of Lesotho's export sector. The results show competitiveness in Lesotho varies from one industry to the other. Textiles industry is the most competitive in Lesotho with 165 product lines which has revealed comparative advantage of equal or greater than 1. It is followed by miscellaneous industry with a demonstrated competitiveness in 35 product lines. The least competitive industries in Lesotho were found to be foot wear/head gear and wood and wood products both with only 4 product lines. The following industries in Lesotho performed badly and have no comparative advantage at all: animal and animal products; raw hides, skins leather and furs; plastic and rubber; chemical and allied industries; food stuffs; and mineral products. Although Lesotho has competitive advantage in textiles industry, it is also very vulnerable due to over-reliance on a single industry. There is a need to diversify through attracting foreign direct investment that will also usher in improvement in competitiveness across industries.

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1. Introduction

Most of the studies which cover the export sector of a country have focused on competitive advantage or comparative advantage in products. A given country is said to have comparative advantage in so many products. There are fewer studies which have looked at inter-industry competitive advantage or comparative advantage. The objective of this paper is to measure inter-industry competitive advantage and performance of Lesotho's export sector. The author's motivation for this paper is based on the fact that Lesotho is a member of the Southern African Development Community (SADC). In this region countries of Southern Africa and the Indian Ocean are seeking deeper integration of their economies through increased intra-regional trade hence it is important studying competitive advantage or

comparative advantage of Lesotho's industrial structure.
This paper begins by setting a hypothesis;
Ho: There is no difference in the comparative advantage and performance of industries in Lesotho's export sector.
However, before the paper deals with the hypothesis, it is necessary to look at the literature on competitive advantage.

2. Literature on Competitive Advantage

The President's Commission on Industrial Competitiveness (1985) defines competitiveness as the degree a country is able to produce products and services in a free and fair condition in conformity with the international markets while increasing prosperity of its citizens. Harrison (1999) defines competitiveness as the ability of the country's firms to produce a good or provide a service then promote it. The good meets high international standards but are sold at lower prices.

According to Porter (1990, 2009) competitiveness is a product of a country's human resource, physical capital e.g. factories and natural resources. In addition, competitiveness is determined by demand conditions as well as the performance of the firms and their strategies and most importantly how well prepared they are in relation to other competing firms. The paper will rely heavily on theories which are related to the principle of comparative advantage not with standing the fact that through out this paper, competitive advantage and comparative advantage are used interchangeably.

The classical theory of comparative advantage points out that gains from exchange increases welfare and that free trade helps in making the world economy prosperous. Various theories linked to comparative advantage have emphasized different aspects which determine it. The Ricardian theory asserts that differences in costs and technological progress give respective countries comparative advantage. Heckscher-Ohlin-Samuelson theory attributes comparative advantage from factor price differential. The Neo-Factor-Proportion theory attributes comparative advantage of a country to arise from efficiency (productivity) of the factors. The technological gap and product cycle theory attributes comparative advantage to be influenced by technological innovations (Bender & Li, 2002). Some other authors such as Widgren (2005) and Mzumara (2006) have attributed comparative advantage from factor endowment. That means a country with an abundant factor will use that factor more intensively to produce products which it will export. Then it will import products which use its scarce factor less intensively. This analysis leads each country to specialization in the production of particular products. Khatibi (2008) attributes comparative advantage from factor scarcity. However, Widgren (2005) and Mzumara (2006) dispute Khatibi (2008) explanation which asserts that the relative scarcity would determine comparative advantage and contend that instead it will determine comparative disadvantage. There are different techniques or methods used to measure comparative advantage or competitive advantage.

2.1. Measures of Comparative Advantage Or Competitive Advantage

One such measure that can be used to measure comparative advantage or competitive advantage is the Revealed Comparative Advantage (RCA). The RCA index is a useful technique which is used to measure comparative advantage. The measure utilizes observable trade balances and assists researchers to conclude the relative sectoral competitiveness of a particular and this is shown when the sector is able to produce efficiently (Ferto & Hubbard, 2000). RCA index measures a country's competitiveness or comparative advantage and it is attained in a normal way such that it represents ratio of ratios which show relative trade shares (Richardson & Zhang, 2007). The RCA measure employs the trend of trade balances to show relative sectoral competiveness. Sectors which show international competitiveness are

those sectors which efficiently produce products for international markets. The sectors which import show lack of competitive advantage. The RCA is the most efficient and acceptable measure as it is not constrained by restrictive assumptions (Mutambatsere, 2007).

Vollarth (1991) developed three alternative measures of the revealed comparative advantage. The first measure is known as relative trade advantage (RTA). It takes an account of both exports and imports. It is calculated as the difference between relative export advantage (RXA) equals to RCA index of Balassa corresponding to relative import advantage (RMA) and takes the form of:

RTA = RXA – RMA

where

RXA = B (Balassa)

and

RMA = (mij/mit) / (mnj/mnt)

Where

mij representing imports in country I of product category of j

mit representing imports of country I of set of commodities t

Therefore

RTA = [(Xij / Xit) / Xnj /Xnt)] - [(mij / mit) / (mnj / mnt)]

Where

Xij representing exports of country i of product category j

Xit representing exports of country i of set of commodities t

Xnj representing exports of set of countries, n of product category j

Xnt representing exports of set of countries, n of set of commodities, t

mij representing imports of country i of product category j

mit representing imports of country i of set of commodities, t

mnj representing imports of set of countries, n of product category j

mnt representing imports of set of counties, n of set of commodities, t

The second measure uses a logarithm of the RTA with In RXA to produce a third specification known as revealed competitiveness (RC) where

RCA = In RXA –In RMA

The advantage of showing the last two measures in logarithm is because of being asymmetric. Therefore Vollrath's measure is positive and summarized as RTA, In RXA and RC. The last one as given above is a revealed comparative advantage or competitive advantage (Ferto & Hubbard, 2000). The difference between Balassa's B and Vollarath's RXA is that RXA eliminates country and product double-counting which is a weakness in Balassa's index. The RXA takes an account all tradable products and all countries in place of subsets hence are more global (Ferto & Hubbard, 2000).

Serin and Civan (2008) provide another technique besides the RCA. This method is known as Comparative Export Advantage (CEP) index. It is a modified Balassa's technique. It is concerned with the measuring of export specialization of a country's specific groups of products and uses the following formula:

CEP = In (XiB / XB) / (XiA /XA)

with

XiB representing country B's exports of good i

XB representing B's total exports

XiA representing total world exports of good i

XA representing total world exports of all goods

Therefore an index value of B larger the index value of the country's *n* shows relative comparative

advantage or competitive advantage of country B against n. Utkula and Seymen (2004) concluded that there are four different techniques which can be used to measure competitiveness.

2.2. Empirical Evidence of Measuring Competitive Advantage or Comparative Advantage Through Use of Balassa (1965) Revealed Comparative Advantage (RCA)

Yeats (1997) applied RCA and concluded that Mercosur has no comparative advantage in the products it exports. The study also concluded that Mercosur's own trade restrictions determine trade variations. Mirzaei et al (2004) found that Iran has no comparative advantage in eggs it exports to the Middle East region. Utkula and Seymen (2004) concluded there is a likelihood of negative trade creation effect for Turkey in the event of it joining the European Union. Trade diversion effects were not significant. Mutambatsere (2007) found that half of SADC member countries did not have comparative advantage in the production of maize (corn). Only Malawi, South Africa and Tanzania had a comparative advantage in the production of maize (corn). Shinyekwa and Othieno (2011) found that Uganda has comparative advantage in a very limited range of products. Mzumara (2011a) concluded that Zimbabwe has comparative advantage in the production of a wide range of products. Mzumara (2011b) found Mozambique to have comparative advantage in the production of 222 product lines. Mzumara (2012) found Botswana has comparative advantage in the production of 244 product lines. Mzumara et al (2012) found the USA to have comparative advantage in 1 791 product lines, Canada in 814 product lines and Mexico in 749 product lines. Jaravaza et al (2013) found Egypt to have comparative advantage in production of 733 product lines. Chingarande and Mzumara (2013) found South Africa to have comparative advantage in 824 product lines.

3. Methodology

Of all the techniques so far available, this paper has opted for Balassa (1965) Revealed Comparative Advantage (RCA). The Balassa's RCA remains valid in revealing true comparative advantage or competitive advantage (Deardorff, 2010). According to Wu and Chen (2004) Balassa's method is very relevant and useful in a dynamic competitive market economy, competitive advantage or comparative advantage as shown in export composition is in line with competitive advantage or comparative advantage based on a country's economy factor endowment and moves along with economic development. Balassa (1965) formula is as follows:

$$RCA = \left(\frac{X_{i,j}}{X_{W,j}} \right) / \left(\frac{X_{i,tot}}{X_{W,tot}} \right)$$

With:
$X_{i,j}$ representing country *i*'s exports of product *j*;
$X_{i,tot}$ representing country *i*'s total exports;
$X_{w,j}$ representing the world's (all countries) export of product *j*; and
$X_{w,tot}$ representing total exports in the world.

An RCA ≥ 1 demonstrates that the country has comparative advantage or competitive advantage in the production of the product. An RCA < 1 demonstrates that the country has no comparative advantage or competitive advantage in the production of the product.

Data used in this paper for Lesotho exports is a mirror data. Both Lesotho's export data and the world's export data was obtained from International Trade Centre (ITC)'s Trademap based in Geneva,

Switzerland. The data was obtained on 6-digit level which is the most acceptable disaggregated international classification of products. Individual RCAs were computed for 2008, 2009 and 2010 the most recent available data then average RCAs for the three year period were also computed.

4. Results and Discussion

Results show textile industry/sector has 165 product lines with RCA ≥ 1. Table 1 shows product lines in textile the industry/sector in which Lesotho has competitive advantage or comparative advantage.

Table 1: Product lines in the textile industry/sector in which Lesotho has competitive advantage or comparative advantage

Industry/sector code (50-63)	Product code	Product description	2008 RCA	2009 RCA	2010 RCA	Average RCA
55	550520	Waste of artificial fibre	1464.467	2325.365	2702.011	2133.948
51	510610	Yarn of carded wool >85% wool, not retail	533.737	818.9272	908.1849	753.6163
52	520535	Cotton yarn >85% multiple uncombed <125 dtex, not retail	780.232	257.6784	617.495	551.8018
53	530290	True hemp fibre otherwise processed but not spun	397.2242	542.1116	638.4631	525.933
61	610819	Women's, girls' slips or petticoats, material, knit	190.883	235.3972	518.2876	314.8577
51	510119	Greasy wool (other than shorn) not carded or combed	0	0	612.5891	204.1964
55	550969	Yarn of acrylic staple fibres, not retail	175.0726	174.9127	192.7222	180.9025
61	611239	Men's, boys' swimwear, of material knit	128.0305	170.9908	232.3506	177.124
61	610520	Men's, boys' shirts of man made fibres, knit	73.67956	188.2725	182.6666	148.2062
52	520849	Woven cotton >85% < 200g/m^2, yarn dyed	106.1601	169.391	163.9257	146.4923
61	610343	Men's, boys' trousers, shorts, synthetic fibres, knit	131.2396	153.025	142.3001	142.1882
61	610463	Women's, girls' trousers, shorts, synthetic fibres, knit	176.0398	78.79117	150.948	135.2597
61	610899	Women's, girls' bathrobe, dressing	83.0856	138.8369	158.6428	126.8551

		gown knit				
51	510320	Waste of wool or fine hair, not noils, garneted stock	110.4092	151.8258	113.0839	125.1063
55	551693	Woven fabric <85% artificial staples, yarn dyed	92.11932	142.535	137.3487	124.001
61	610462	Women's, girls' trousers and shorts of cotton, knit	121.39	125.8058	121.3955	122.8649
52	520299	Cotton, waste, except garneted stock	106.6071	133.0463	106.3782	115.3439
51	510510	Carded wool	97.31539	162.0626	73.76342	111.0471
60	600390	Knitted/crocheted fabrics of a width not >30cm (excluding of 60.1/60.02)	83.91641	137.3072	98.37145	106.5317
62	620342	Men's, boys' trousers and shorts, of cotton not knit	97.1616	88.92816	107.3416	97.81047
61	610510	Men's, boys' shirts of cotton, knit	85.17909	107.8858	92.97811	95.34766
61	611219	Tract suits, of materials, knit	61.08384	90.54383	109.6427	87.09011
52	520210	Cotton yarn waste (including thread waste)	63.45671	98.91448	94.52044	85.63454
55	551694	Woven fabric <85% artificial staples, printed	59.67601	100.3298	89.45057	83.15213
61	611020	Pullovers, cardigans etc of cotton knit	95.19815	69.58482	52.26291	72.34863
52	521142	Denim cotton <85% man made fibre, >200g/m^2	131.3136	79.37974	4.317854	71.6704
61	610590	Men's, boys' shirts of materials, knit	0.106841	0	211.682	70.59627
51	510539	Fine animal hair, carded/combed other than Kashmire (Cashmere) goats	67.43026	84.71719	56.45608	69.53451
62	621230	Corselettes and parts thereof	55.28547	71.29656	72.69754	66.42652
51	510620	Yarn of carded, wool, <85% wool not retail	57.86762	73.27546	66.4522	66.06155
62	620421	Women's, girls' ensembles, of wool or	42.80074	73.27546	80.68213	65.58611

		hair, not knit				
62	6211141	Women's girls' garments of wool or hair, not knit	33.66652	61.16675	99.49069	64.77465
61	610120	Men's, boys' overcoats, etc, of cotton, knit	128.0404	61.42941	2.729685	64.00651
61	610422	Women's girls' ensembles, of cotton, not knit	40.25132	66.67885	81.21598	62.71538
61	610461	Women's, girls' trousers and shorts of wool hair, knit	51.64413	67.72307	64.29168	61.21962
62	620462	Women's, girls' trousers and shorts, of cotton, not knit	52.96912	60.06809	60.66753	57.90158
51	510310	Noils of wool or of fine animal hair	48.50851	63.48334	45.80478	52.9888
62	620920	Babies garments, accessories of cotton, not knit	30.07711	64.81527	60.42514	51.77251
61	610342	Men's, boys' trousers and shorts, of cotton, knit	68.34038	55.68044	25.34565	49.7882
55	551349	Woven fabric >85% synth + cotton, <170g/m^2 printed	56.01616	52.82097	36.84347	48.5602
61	611030	Pullovers, cardigans etc of man made fibres, knit	41.33047	39.17372	40.15073	40.21831
61	610341	Men's, boys' trousers and shorts, of wool or hair knit	33.51238	43.48924	43.13545	40.04466
58	580220	Terry toweling etc, other than cotton, width >30cm	23.75572	46.48924	43.8259	38.02362
62	620322	Men's, boys' ensembles of cotton, not knit	29.76307	39.61805	41.43812	36.93975
62	620463	Women's girls' trousers, shorts synth fibres, not knit	31.73006	60.42478	18.07077	36.74187
61	610892	Women/girl bathrobe, dressing gown, knit	0.609107	15.85642	90.53367	35.6664
55	551692	Woven fabric <85% artificial staples, dyed	26.1818	38.79565	37.39912	34.12552
52	520511	Cotton yarn >85%	11.95128	14.87016	70.62404	32.48183

		single uncombed >714 dtex, not retail				
52	520942	Denim cotton >85% >200g/m^2	48.90419	43.50275	3.385687	31.93089
61	610220	Women's girls' overcoats, etc, of cotton knit	24.57083	15.80824	55.07846	31.81918
55	550962	Yarn of acrylic staple fibres and cotton, not retail	24.59257	37.16611	32.87998	31.54622
52	520546	Combed multi cotton yarn	22.00338	30.38637	40.69214	31.0273
63	630399	Curtains drapes blinds valances, material, woven	25.38042	33.36231	33.61443	30.78572
61	610429	Women's, girls' ensembles, of material, knit	21.86591	29.41051	34.4344	28.82511
61	611231	Men's, boys' swimwear, synthetic fibres, knit	25.34188	29.09542	29.29538	27.91089
61	610610	Women's, girls' blouses and shirts, of cotton, knit	23.44408	28.03742	29.745	27.0755
55	550961	Yarn of crylic staple fibre and wool or hair, not retail	22.11471	28.87356	29.52269	26.83699
51	510810	Yarn of carded fine animal hair, not retail	21.07172	29.25598	28.51461	26.28077
58	580219	Terry toweling etc of cotton, width >30cm	20.86443	27.84668	28.59666	25.76925
62	620433	Women's, girls' jackets, blazers, synth fibres not knit	25.50569	39.03295	12.26246	25.60037
52	520544	Cotton yarn >85% multiple combed 192-125 dtex, not retail	20.71369	25.94873	30.07281	25.57841
61	610839	Women's, girls' nightdress pajamas, material, knit	12.77806	31.65805	31.72128	25.3858
61	610230	Women's, girls' overcoats etc, man made fibres, knit	24.63584	19.80344	18.50479	20.98202
61	611130	Babies garments accessories of synthetic fibres, knit	10.896	22.01322	28.29929	20.40309
62	621111	Men's, boys'	16.33789	20.64028	22.4498	19.80933

		swimwear, not knit				
61	611430	Garments, of man made fibres, knit	15.93504	19.04164	21.61134	18.86267
63	630520	Sacks ad bags packing, of cotton	16.99609	19.80852	19.54253	18.78238
61	610441	Women's, girls' dresses, of wool or hair, knit	15.59159	17.73089	21.5792	18.30054
61	611420	Garments of cotton, knit	17.72045	23.58389	12.94247	18.08227
55	551441	Woven plain >85% polyester + cotton >170g/m^2 printed	13.99475	19.86386	20.13246	17.99703
61	610712	Men's boys' underpants or briefs man made fibre, knit	16.17099	22.994	10.43541	16.53347
55	551599	Woven fabrics synthetic staple fibres	0	49.17599	0	16.392
61	610620	Women's girls' blouses and skirts man made fibre, knit	8.050406	19.63091	19.84327	15.84153
61	610990	T-shirts, singles etc, of material, knit	13.43723	6.97613	24.04663	14.82
62	620422	Women's, girls' ensembles, of cotton not knit	9.561238	13.75509	19.41249	14.24294
62	620423	Women's, girls' ensembles, synthetic fibre, not knit	10.2366	14.7121	16.86091	13.93654
61	610331	Men's, boys' jackets and blazers, wool or hair, knit	11.81921	13.87565	12.4746	12.72299
62	620411	Women's girls' suits of wool or hair not knit	7.54242	11.35605	19.06406	12.65418
62	621112	Ski suits of textile material not knit	8.539567	12.55326	16.28847	12.46043
61	610910	T-shirt, singlets and other vests, of cotton, knit	12.74531	12.03828	11.53178	12.10512
61	610719	Men's, boys' underpants or briefs, material, knit	8.791444	12.7748	14.54471	12.03698
63	630259	Table linen of material not knit	8.465237	13.87353	13.1709	11.83656
61	610829	Women's, girls' briefs or panties, material	10.02862	12.25481	12.0846	11.45601

		knit				
52	520548	Combed mult cotton yarn	9.122074	14.99771	10.00824	11.25494
61	610453	Women's girls' skirts, synthetic fibres, knit	0	20.42306	13.34175	11.2463
63	630240	Table linen of textile knit or crochet materials	7.228115	11.84031	12.18274	10.41706
61	610452	Women's, girls' skirts, of cotton, knit	17.17936	6.172972	6.866861	10.07306
61	610130	Men's, boys overcoats, etc, of man made fibres, knit	22.81537	1.620441	3.254108	9.229973
61	611190	Babies garments accessories of material, knit	6.243435	8.572633	11.07713	8.631066
61	611120	Babies garments, accessories of cotton knit	10.76046	10.51876	4.439947	8.5733055
61	611691	Gloves, mittens or mitts of wool or hair, knit	8.673206	9.701713	7.331941	8.568953
52	521225	Woven cotton fabric > 200g/m^2 printed	6.801946	9.622003	8.750985	8.391645
61	610451	Women's, girls, skirts, of wool or hair knit	6.549044	8.160077	10.18207	8.297063
52	521211	Woven cotton fabric c>200g/m^2 unbleached	7.932312	8.723681	7.062127	7.90604
63	630299	Toilet or kitchen linen of material	7.057022	8.454543	7.904649	7.805405
62	620721	Men's boys' nightshirts or pajamas, cotton, not knit	5.804854	8.738759	8.4412	7.661604
61	611241	Women's, girls' swimwear, synthetic fibres knit	6.374205	7.485492	8.103202	7.320966
61	610322	Men's, boys ensembles of cotton knit	4.462305	8.076765	8.736708	7.091926
58	580610	Slag wool, rock wool, similar wools, bulks sheet, roll	6.515055	7.310545	6.895576	6.907059
52	521049	Woven cotton <85% + man made fibre <200g yarn dyed	5.189941	7.322063	8.198862	6.903622
62	620640	Women's, girls' blouses, shirts, man	0.897239	0.924248	18.22402	6.681837

		made fibre, not knit				
54	540249	Yarn synth filament, single untwisted, not retail	5.590221	7.968349	6.147948	6.568839
54	540834	Woven fabric of artificial filament printed	4.959592	6.084889	8.241751	6.428744
55	551443	Woven>85% polyester + cotton >170g/m^2 printed	5.974839	6.939034	6.01594	6.309937
52	520512	Cotton yarn >85% single uncombed 714-232 dtex not retail	1.919628	1.103449	15.88846	6.303846
63	631010	Used or new rags textile material sorted	5.308897	6.772853	6.395625	6.159125
54	540269	Yarn synthetic filament, multiple, not retail	5.506243	6.837043	5.492612	5.945299
52	520623	Cotton yarn <85% singled combed 232-192 dtex, not retail	0	0	17.74738	5.915793
52	520521	Cotton, yarn >85% single combe >714 dtex, not retail	2.865638	4.952065	9.590424	5.802709
51	510710	Yarn of combed wool >85% wool not retail	4.18376	6.053752	5.450682	5.229398
62	620829	Women's, girls' nightdress, pajamas, material, knit	3.800378	4.419079	7.419924	5.213127
61	610332	Men's, boys' jackets and blazers cotton, knit	4.771324	5.439659	4.990702	5.067228
62	620821	Women's, girls nightdress pajamas of cotton, not knit	4.305418	5.174277	5.428198	4.969298
65	650510	Hair-nets of any material	4.013114	5.165106	4.653781	4.610667
53	530911	Woven fabric >85% flax, unbleached or bleached	3.76202	5.316414	4.670599	4.583029
58	580134	Woven warp pile fabric man made fibre, epingle (uncut)	2.154199	3.518066	8.016365	4.562877
55	550510	Waste of synthetic fibres	3.377678	5.531777	4.669265	4.58624
52	520100	Cotton, not carded or combed	0	0	13.5567	4.578901

55	550941	Yarn >85% other synth staple fibres, single not retail	4.095134	5.089077	4.12678	4.43683
52	520959	Woven cotton >85% >200g/m^2, printed	3.413652	4.701848	4.915476	4.343659
61	610190	Men's, boys overcoats, etc of material knit	2.617608	3.689572	6.314393	4.207191
62	620811	Women's, girls slips etc, of man made fibres, not knit	2.838227	3.998438	5.053845	3.963503
63	630291	Toilet or kitchen linen, cotton	3.310788	4.430793	3.971644	3.904408
62	620799	Men's, boys dressing gowns, material, not knit	3.316105	3.681299	3.84774	3.615059
52	520819	Woven cotton >85%<200g/m^2 unbleached	3.447162	3.723765	3.427338	3.532755
62	621220	Girdles pantry girdles and parts thereof	3.051308	3.627321	3.158141	3.278923
62	621590	Ties, bow ties and cravats, material, not knit	2.956377	3.765672	3.054287	3.258779
55	551299	Woven fabric >85% synthetic staple fibre	2.608476	3.765219	3.30824	3.227312
61	611212	Track suits, synthetic fibre	0	0	9.434925	3.144975
61	611699	Gloves, mittens or mitts, material, knit	2.787531	3.288573	2.875993	2.984366
63	630239	Bed linen, of material	2.75744	3.171853	3.013543	2.980945
52	520821	Plain weave cotton >85%<100g/m^2, bleached	2.639912	2.917569	2.462884	2.673455
62	620711	Men's boys underpants or briefs, of cotton, not knit	2.089433	2.618508	2.80634	2.50476
63	630800	Set, woven fabric and yarn for rugs, tapestry	1.996284	2.650166	2.671625	2.439358
50	500790	Woven fabric of silk	1.780914	2.798224	2.482207	2.353735
61	610290	Woven fabric of silk	1.570685	2.146557	3.165733	2.94335
62	620333	Men's, boys' jackets, blazers, synthetic fibre, not knit	3.693293	2.697967	0.345002	2.245421
57	570231	Carpets of wool or hair, woven pile, not made up	0	6.34895	0	2.116317

52	520645	Cotton yarn <85% multiple combed <125 dtex, not retail	1.652396	2.107908	2.222857	1.994397
61	610419	Women's, girls suit of material, knit	1.689344	1.756386	2.43192	1.959217
62	620111	Men's, boys overcoats	1.698081	2.089259	1.929337	1.905559
63	630251	Table linen, of cotton, not knit	1.802046	2.33611	1.420144	1.852767
50	500600	Silk yarn retail, silk worm gut	1.366236	1.933218	1.818344	1.705932
63	630391	Curtains drapes blinds valances, cotton, not knit	1.49668	1.896782	1.634189	1.67588
54	540262	Yarn of polyester filament, multiple, not retail	0.777385	2.233404	1.775101	1.595297
61	610821	Women's, girls briefs or panties, of cotton, knit	1.417177	1.7519	1.577782	1.582286
62	621149	Women's, girls garments, material, not knit	1.238884	1.703938	1.687582	1.543468
62	620452	Women's, girls' skirts of cotton, not knit	0.250618	4.323281	0.14005	1.529301
61	610791	Men's, boys' bathrobes, dressing, gowns etc, cotton knit	0	0	4.486764	1.495588
62	621440	Shawls, scarves etc of artificial fibres, not knit	1.854853	1.593605	0.943997	1.4641522
61	611599	Hosiery of material knit	1.200357	1.535907	1.534356	1.430207
62	620343	Men's boys trousers, shorts synthetic fibre, not knit	1.221196	0.985337	1.834295	1.346943
62	621410	Shawls, scarven, etc, of silk etc, not knit	1.231224	1.374072	1.405842	1.337046
60	600542	Warp knit fabrics including those made on gallon machines	1.236335	1.34116	1.369447	1.315647
61	611019	Jerseys, pullovers, cardigans, waist coats and similar articles, knitted or crochet	2.683121	1.145211	0	1.276111
61	610442	Women's, girls' dresses, of cotton, knit	0.33087	0	3.135929	1.1556
61	611300	Garments of knit or	0	2.047437	1.388476	1.145305

		crochet impregnated fabric				
63	630499	Furnishing goods, material	0.995798	1.153073	1.224039	1.124303
52	520522	Cotton yarn >85% single combed 714-232 dtex not retail	0	0	3.142894	1.047631
62	620469	Women's, girls' trousers, shorts, material, not knit	1.680786	1.334756	0.069234	1.028259
62	621139	Men's, boys' garments, material, not knit	0	0	3.070753	1.023584
60	600610	Knitted/crocheted fabrics in ch.60, wool/fine animal hair	0.884876	1.135021	1.006949	1.008949
59	590691	Rubberized textile knit or crochet fabric	0.872887	1.150423	0.981644	1.001651
63	630510	Sacks and bags, packing of jute or other bast fibres	0.828017	0.805569	1.368526	1.000704
51	511290	Woven fabric, combed wool or hair with natural fibre	0.664068	1.098372	1.239302	1.000581

Source: Computed using the data obtained from Trademap (2013)

Waste of artificial fibre in table 1 has the highest RCA index of 2163.9. It is followed by yarn of carded wool >85% wool with RCA index of 753.6. In the third place is cotton yarn >85% multiple uncombed with RCA index of 551.8. It is followed by hemp fibre with RCA index of 525.9. The fifth place is occupied by women's, girls' slips or petticoats material, knit with RCA index of 314.9. They are followed by greasy wool not carded or combed with RCA index of 204.2. In the seventh position is yarn of acrylic staple fibres, not retail with RCA index of 177. On the ninth place are men's, boys' shirts of man made fibres, knit with RCA index of 148. They were followed by woven cotton, >85% <200g/m^2 yarn dyed with RCA index of 146.5.

Miscellaneous industry/sector has 35 product lines with RCA $\geq$ 1. Table 2 shows product lines in miscellaneous industry/sector in which Lesotho has competitive advantage or comparative advantage.

Table 2: Product lines in the miscellaneous industry/sector in which Lesotho has competitive advantage or comparative advantage

Industry/sector code (90-97)	**Product code**	**Product description**	**2008 RCA**	**2009 RCA**	**2010 RCA**	**Average RCA**
91	911430	Clock or watch dials	734.9591	1114.696	990.0328	9.46.5625
91	911390	Watch straps etc and parts, of leather/plastic	264.4864	385.4482	388.5527	346.1624

		etc				
93	930119	Artillery weapons (eg guns, howitzers and mortars) other than self – propelled	552.6757	278.1989	181.7531	337.5426
91	911090	Clock movements, unpartly assembled rough	235.2498	307.2225	383.0574	308.5099
95	950790	Fishing and hunting equipment and requisites	89.93768	107.7656	105.7204	101.1412
90	901850	Ophthalmic instruments and appliances	14.84938	17.32502	16.55449	16.53347
91	910299	Pocket-watch, base-metal case, non-battery	12.82605	16.26663	12.08797	13.72688
96	960329	Shaving, hair, nail, eyelash and other toilet brushes	8.584942	11.1127	9.976256	9.891298
96	961310	Pocket lighters, gas-fueled, non-refillable	9.058878	9.98637	9.975211	9.673642
90	901050	Appliances and equipment for ph labour	4.868285	11.74672	11.30239	9.305797
93	930320	Shotguns, shotgun-rifles for sport, hunting or target	25.1559	0	0	8.385299
91	910199	Pocket-watch, precious-metal case, non-battery	7.920239	7.949009	7.268501	7.712583
90	900140	Spectacle lenses of glass	6.07728	6.473324	8.383734	6.978113
91	911190	Polysulphides, polysulpones etc in primary form	4.140181	6.538599	7.32294	6.000573
90	901010	Equipment for automatic development of	4.305983	6.340591	6.83973	5.828768

		photo film				
95	950730	Fishing reels	5.230046	6.259287	5.813091	5.767475
96	960500	Travel sets toilet sewing, shoe, clothes cleaning	3.599232	5.027583	5.838611	4.821809
92	920190	Harpsichords, keyboard stringed instruments	3.871247	4.200821	3.08264	3.718236
91	910119	Wristwatch, precious metal, battery, other	4.043156	3.6117	3.158119	3.604148
96	960400	Hand sieves and hand riddles	2.916279	4.059327	3.741066	3.572224
91	910911	Clock movements, complete and assembled, battery/alarm	2.058481	2.909939	5.120567	3.363002
90	901090	Parts and accessories for photo laboratory equipment	1.543122	3.184484	2.830542	2.519383
93	930111	Artillery weapons (e.g guns, howitzers and mortars) self-propelled	1.181125	3.463022	2.145511	2.473261
90	900630	Cameras for special use under water aerial	1.603093	2.031063	1.92483	1.806761
94	940421	Mattresses of cellular rubber or plastic	1.648429	1.941745	1.871641	1.820605
90	903010	Instruments to measure or detect ionizing radiations	1.714622	1.78084	192482	1.806761
95	950629	Water-skis surf-boards, other water sport equipment	1.538136	1.923861	1.927407	1.796468
90	900820	Microfilm, microfiche or other microform	1.379415	1.549031	2.45596	1.794802
91	910519	Alarm clocks,	1.175507	1.585993	1.72718	1.496227

		non-electric				
91	910990	Clock movements, complete and assembled, non-battery	1.426464	1.273039	1.024235	1.241246
90	900791	Parts and accessories for cinematographic cameras	1.009167	1.438201	1.232092	1.226487
91	901813	Magnetic resonance imagi	1.27743	1.207462	1.060425	1.131877
91	910529	Wall clocks, non-electric	0.977544	1.133073	1.224039	1.124303
90	902221	Medical apparatus using alpha, beta or gamma radiation	0.936459	1.275208	1.15412	1.121929
91	910191	Pocket-watch, precious-metal case battery	1.050428	1.165088	0.881321	1.032279

Source: Computed using the data obtained from Trademap (2013).

In table 2 above, clock or watch dials have the highest RCA index of 946.6. They are followed by watch straps and parts of leather which have RCA index of 346. In the third place is artillery weapons which are not self propelled have RCA index of 337.5. They are followed by clock movements partly or not partly assembled, rough clocks with RCA index of 308.5. In the fifth position is fishing with RCA index of 101. They are followed by ophthalmic instruments and appliances with RCA index of 16.5.

Metals industry/sector has 23 product lines with RCA $\geq$ 1. Table 3 shows product lines in metals industry/sector in which Lesotho has competitive advantage or comparative advantage.

Table 3: Product lines in the metals industry/sector in which Lesotho has competitive advantage or comparative advantage

Industry/sector code (72-83)	**Product code**	**Product description**	**2008 RCA**	**2009 RCA**	**2010 RCA**	**Average RCA**
73	730690	Tube/pipe/hollow profile, iron/steel, riveted/open sea	122.6441	163.7072	181.4434	155.9317
72	720410	Waste or scrap of cast iron	77.61197	148.7294	118.5789	114.9734
72	721011	Flat rolled iron or non alloy steel, coated with tin, w>600mm, t>0.5m	17.30758	30.19138	24.06931	23.85609
72	720430	Waste or scrap, of	14.63584	29.88272	21.41376	21.77074

		tinned iron or steel				
72	720429	Waste or scrap, of alloy steel, other than stainless	10.32905	16.53893	14.53644	13.80148
79	790310	Zinc dust	8.933945	14.71855	10.08642	11.2463
72	721260	Flat rolled iron or non-alloy steel, width <600m, clad	8.255892	14.30606	10.5693	11.04375
76	761511	Pots sourers, aluminum	5.517398	10.35718	8.662797	8.112458
73	732429	Baths, iron or steel, except cast iron	5.927178	8.148817	8.384625	7.486873
72	721699	Angles shps sec nfw worked	2.422386	5.358355	6.378371	4.719704
73	731300	Wire for fencing, including barbed wire	3.377334	4.416347	5.23692	4.343533
76	761520	Aluminium sanitary ware, parts threof	3.130298	4.467224	4.88606	4.161194
72	721310	Hot rolled bar/rod grooved iron or non-alloy steel in irregular coils	2.66264	5.235812	4.429775	4.109411
73	731290	Plaited bands/etc, iron, steel, no electric insulation	2.913953	4.332744	4.548398	3.931698
74	741820	Sanitary ware and parts thereof of copper	2.630063	3.933839	3.393026	3.363002
82	821591	Cutlery not in sets, plated with precious metal	1.655336	2.774786	2.37287	2.267664
73	730590	Tube/pipes iron/steel riveted etc, diameter >406.4m	1.635459	2.269522	2.143444	2.016142
74	740400	Copper/copper alloy waste or scrap	1.655615	2.545029	1.559924	1.920189
74	740929	Plate/sheet/strip, copper-zinc alloy, flat, t>0.15m	1.350022	2.143403	1.546832	1.680086

73	731450	Expanded metal, iron or non-alloy steel <3mm wire <100cm mesh	1.146067	1.774065	1.744617	1.554916
73	731439	Grill, netting, fencing	0.770374	1.134448	1.228664	1.044495
82	821195	Handles for knives	4.714329	8.639433	8.498724	7.284162
82	820140	Axes bill hooks and similar brewing tools	6.5495	7.862517	6.964475	7.125597

Source: Computed using the data obtained from Trademap (2013).

Tube/pipe/hollow profile, iron/steel, riveted/open sea in table 3 has the highest RCA index of 155.9. It is followed by waste or scrap of cast iron with RCA index of 115. In the third place is flat rolled iron or non alloy steel, coated with tin, width >600mm, t>0.5 with RCA index of 23.9. This is followed by waste or scrap of tinned iron or steel with RCA index of 21.8. In the fifth place is waste or scrap of alloy steel, other than stainless with RCA index of 13.8.

Stone/glass industry/sector has 14 product lines with RCA≥1. Table 4 shows product lines in stone/glass industry/sector in which Lesotho has competitive advantage or comparative advantage.

Table 4: Product lines in the stone/glass industry/sector in which Lesotho has competitive advantage or comparative advantage

Industry/sector code (68-71)	**Product code**	**Product description**	**2008 RCA**	**2009 RCA**	**2010 RCA**	**Average RCA**
71	710231	Diamonds (jewellery) unworked or simply sawn, cleaved	202.9787	187.442	179.6041	190.009
71	711419	Gold/silver smith wares of/clad with precious metal	119.3753	38.28053	29.85239	62.50274
71	711320	Jewellery, parts, base metal clad with precious metal	35.06134	21.97244	29.44157	28.82511
71	710210	Diamonds, unsorted	46.2564	0	0	15.4188
69	690810	Glazed	13.48528	13.35935	16.14197	14.32886

		ceramic mosaic tiles <7cm wide				
71	711291	Waste and scrap of gold including metal clad with gold but excluding sweepings	11.70539	14.91212	12.41408	13.01053
71	710229	Diamonds industrial, worked	12.38463	11.79051	14.36107	12.8454
71	711230	Ash containing precious, semi-precious metal comps	7.446278	18.71947	9.169246	11.97833
71	711620	Articles of precious, semi-precious, artificial stone	7.151341	7.302498	7.265545	7.239795
69	690710	Unglazed ceramic mosaic tiles <7cm wide	5.121887	6.708235	5.435306	5.755143
71	711810	Coin (other than gold coin) not being legal tender	17.14601	0	0	5.715336
69	690600	Ceramic pipes, conduits, guttering and fittings	2.038496	2.877976	3.285055	2.733842
69	691190	Household and toilet articles of porcelain	0	0	3.297099	1.099033
69	691090	Ceramic bath room	0.783745	1.149111	1.101472	1.011443

		kitchen sanitary items not porcelain				

Source: Computed using the data obtained from Trademap (2013).

Diamonds (jewellery) unworked or simply sawn, cleaved have the highest RCA index of 190 in table 4. They are followed by gold/silver smith wares of clad with precious metal with RCA index of 62.5. In third place is jewellery, parts, base metal clad with precious metal with RCA index of 28.8. They are followed by diamonds, unsorted with RCA index of 15.

Transportation industry/sector has 6 product lines with RCA ≥ 1. Table 5 shows product lines in transportation industry/sector in which Lesotho has competitive and comparative advantage

Table 5: Product lines in transportation industry/sector in which Lesotho has competitive advantage or comparative advantage

Industry/sector code (86-89)	**Product code**	**Product description**	**2008 RCA**	**2009 RCA**	**2010 RCA**	**Average RCA**
88	880211	Helicopters of unladen weight <2, 000 kg	27.77482	47.14019	61.1992	45.3714
88	880400	Parachutes, parts and accessories	39.54833	44.93342	45.17364	43.21846
88	880220	Fixed wing aircraft, unladen weight <2000kg	4.258103	11.64982	10.87832	8.928748
89	890790	Buoys, beacons, coffer-dams pontoons, floats	7.530137	8.93927	9.519306	8.662904
89	890399	Rowing boats, canoes pleasure boats except sail/powered	1.347047	2.345301	2.171187	1.954512
87	871500	Baby carriages and parts thereof	1.271808	1.720653	1.599467	1.530643

Source: Computed using the data obtained from Trademap (2013).

Helicopters of an unladen weight <2 000 kg in table 5 have the highest RCA of 45. They are followed

by parachutes, parts and accessories thereof with RCA of 43. In third place is fixed wing aircraft, unladen weight < 2000kg with RCA index of 8.9.

Vegetable products industry/sector has 5 product lines with ≥ 1. Table 6 shows product lines in vegetable products industry/sector in which Lesotho has competitive or comparative advantage.

Table 6: Product lines in vegetable industry/sector in which Lesotho has competitive advantage or comparative advantage

Industry/sector code (06-15)	Product code	Product description	2008 RCA	2009 RCA	2010 RCA	Average RCA
11	110313	Maize (corn) groats or meal	16.67905	19.84502	17.55048	18.02485
14	140490	Vegetable products	6.55742	9.858852	4.378384	6.93154
07	071120	Olives, provisionally preserved	9.166686	0	0	3.055529
11	110220	Maize (corn) flour	0	7.780081	0	2.59336
08	081340	Fruits, dried	0	3.047325	3.133786	2.06037

Source: Computed using the data obtained from Trademap (2013).

Maize (corn) groats or meal in table 6 has the highest RCA index of 18. It is followed by vegetables products with RCA index of 6.9.

Wood and wood products industry/sector has 4 product lines with ≥ 1. Table 7 shows product lines in wood and wood products industry/sector in which Lesotho has competitive or comparative advantage.

Table 7: Product lines in wood and wood products industry/sector in which Lesotho has competitive advantage or comparative advantage

Industry/sector code (44-49)	Product code	Product description	2008 RCA	2009 RCA	2010 RCA	Average RCA
48	481720	Letter or correspondence cards, plain post cards	102.2355	128.411	106.5051	112.3839
48	482090	Office supplies of paper, book covers, blotters	8.818591	10.70641	12.09913	10.54137
48	481930	Sacks and bags of paper, having a width>40 cm	4.051041	5.378536	5.136341	4.855306
49	490210	Newspapers, journals and periodicals >3 issue/week	1.114916	1.56969	1.702344	1.462317

Source: Computed using the data obtained from Trademap (2013).

Letter or correspondence cards have RCA index of 112 in table 7. They are followed by sacks and bags of paper with width of >740cm with RCA index of 4.9.

Footwear/head gear industry/sector has 4 product lines with RCA≥1. Table 8 shows product lines in foot wear/head gear industry/sector in which Lesotho has competitive and comparative advantage.

Table 8: Product lines in foot wear/head gear industry/sector in which Lesotho has competitive advantage or comparative advantage

Industry/sector code (64-67)	Product code	Product description	2008 RCA	2009 RCA	2010 RCA	Average RCA
64	640320	Foot wear soles/uppers leather, strap instep and big	3.083797	5.024603	8.896674	5.668358
64	640220	Foot wear, rubber, plastic, straps fix to sole by plug	2.103646	2.4147	1.760477	2.092941
65	650700	Parts of hats and head gear	1.304664	1.344966	1.86321	1.27865
65	650699	Head gear of other materials	0.99013	1.346112	1.216011	1.184056

Source: Computed using the data obtained from Trademap (2013).

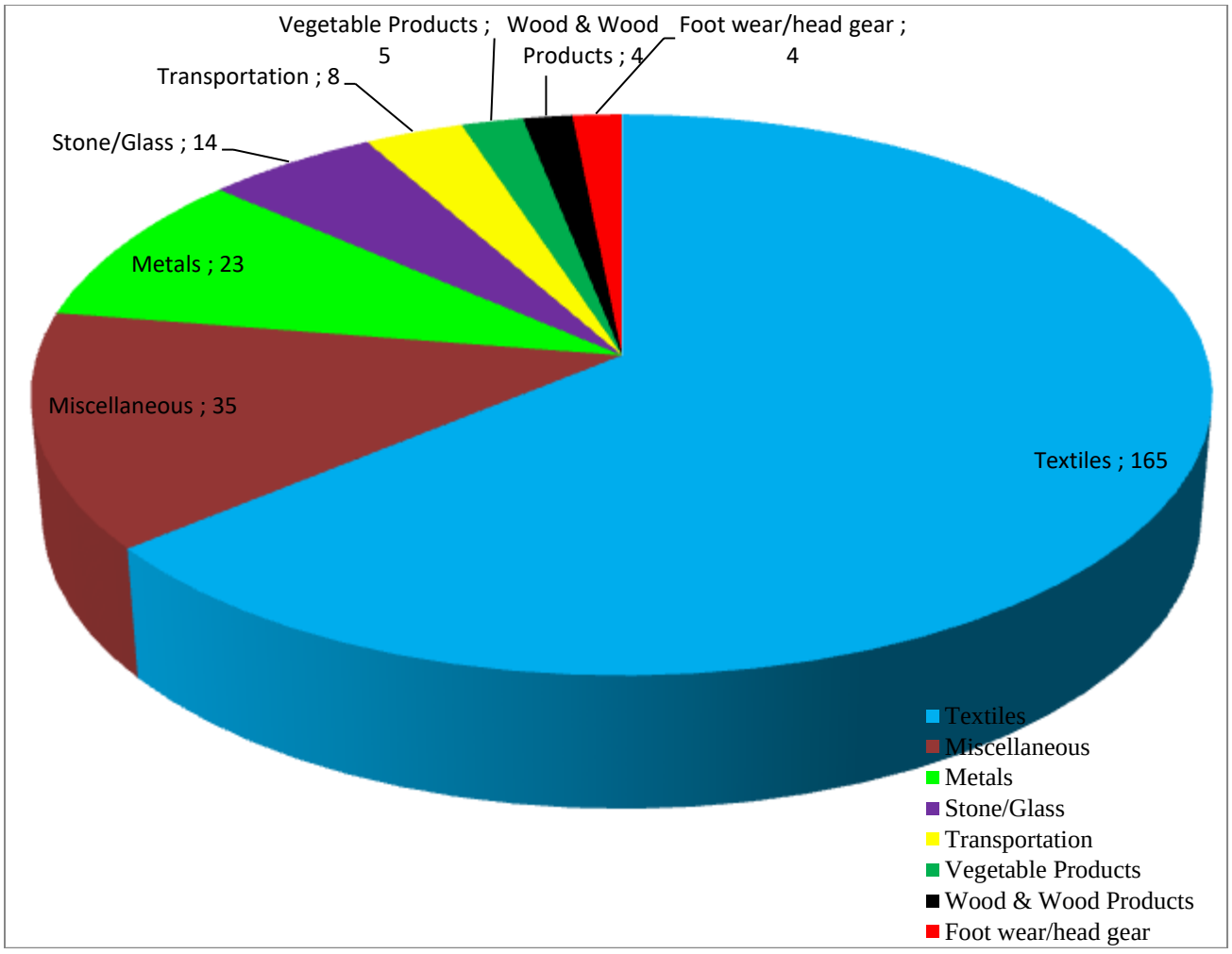
Foot wear, soles/uppers leather, strap instep and big have the highest RCA index of 5.7 in table 8.

The results also show that there were no products with RCA≥ 1 in the following industries/sectors: animal and animal products; raw hides' skins leather and furs; plastic and rubber; chemicals and allied industries; food stuffs; and mineral products. This shows Lesotho is not competitive in these industries.

The results although are based on industries are consistent with the results of empirical evidence discussed in the literature review. The empirical evidences were based on product lines rather than inter-industry competiveness. However, to arrive at inter-industry competiveness RCAs for product lines were computed then categorized in their respective industries. These results are therefore consistent with reported empirical evidence.

Comparison of Inter-Industry Competitive Advantage

In figure 1 below, shows comparison of inter-industry competitive advantage in Lesotho.
Figure 1: Comparison of inter-industry competitive advantage in Lesotho



In Figure 1 above, textile is the most competitive industry/sector in Lesotho with 165 product lines in which it has RCA≥ 1. Mostly are manufactured clothing. Miscellaneous is the second competitive industry/sector with 35 product lines. It is followed by metals which has 23 product lines with RCA≥1. In the fourth place is stone/glass with 14 product lines demonstrating competitive advantage. It is followed by transportation industry/sector with 8 product lines in which it has competitive advantage. The sixth place is occupied by vegetable products industry/sector with 5 product lines in which it has competitive advantage. They are followed by wood and wood products and foot wear/head gear industries/sectors each have 4 product lines in which they are competitive.

5. Results and Hypothesis

The null hypothesis set in this paper is restated here;
There is no difference in the competitive advantage and performance of industries in Lesotho's export sector.
Based on the results reported above and their analysis, the above null hypothesis is rejected and that the alternative hypothesis that there is a difference in the competitive advantage and performance of industries in Lesotho's export sector is true.

Conclusions And Recommendations

The paper concludes that there is evidence that competiveness in Lesotho vary from Industry to the other. Textile industry is the most competitive of all industries in Lesotho. The second most competitive industry is miscellaneous. The least competitive industries in Lesotho are wood and wood products and foot wear/head gear. The following industries clearly demonstrate lack of competitive advantage and have performed poorly in international trade: animal and animal products; raw hides, skins leather and furs, plastic and rubber; chemical and allied industries; food stuffs and mineral products. Competitiveness is very much concentrated in one industry mainly textile. Lesotho is therefore very vulnerable due to over-reliance in a single industry. Any disturbance in this industry would result in significant drop in exports for Lesotho and its productivity. There are also a very limited number of products in all industries in which Lesotho has competitive advantage except textile industry. Textile industry is labor intensive hence such labor is readily available in Lesotho.

The conclusions as stated above demonstrate the need for Lesotho to diversify its economy in order to improve on competitive advantage. Lesotho should endeavor to attract foreign direct investment (FDI). If Lesotho succeeds in attracting FDI, it will improve its competitiveness through infusion of technology as well as superior management skills. It is further recommended that Lesotho should attract international firms which outsource from countries such as Pakistan and Bangladesh to boost its textile industry further as the country has demonstrated it has competitive advantage in the textiles industry. These chances of attracting the firms can be enhanced through offering them incentives to entice them locate to Lesotho. FDI should not be restricted to textiles industry only but to other industries as well especially the ones with very little competitiveness or no competitiveness at all.

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