



UNDERSTANDING THE FIRM-LEVEL EXPORT DIVERSIFICATION CHARACTERISTICS IN BOTSWANA

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About BIDPA

The Botswana Institute for Development Policy Analysis (BIDPA) is an independent trust, which started operations in 1995 as a non-governmental policy research institute. BIDPA's mission is to inform policy and build capacity through research and consultancy services.

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EXECUTIVE SUMMARY

This Policy Brief unravels interesting insights pertaining to firm-level export diversification characteristics in Botswana, which is an approach that views export diversification at the micro-level. The following are the key highlights from the Policy Brief:

- Exporters whose export portfolios are varied in terms of products and export markets, commonly referred to as multi-product multi-destination exporters in the literature fetch high export values, which is a

prerequisite for sustained economic growth in the country.

- The growth and diversification of Botswana's export bundle is undermined by the exporters' inability to break into new export markets.
- The main policy message is therefore that to transition from the upper-middle income status to high-income status by 2036, the country needs to nurture and develop the multi-product multi-destination exporters. Targeted interventions aimed at developing these exporters are therefore called for.

INTRODUCTION

One of the key themes in Macroeconomics is understanding aggregate fluctuations through the lens of microeconomic sources by studying firm behaviour. This is because of the evidence from the literature that attributes larger aggregate fluctuations to a country specialising in highly volatile sectors (Di Giovanni et al., 2014). In this light, diversification of sales across destinations and sectors is viewed as a potential channel to mitigate aggregate fluctuations. Export diversification is thus seen as one of the potential avenues that can be used by developing countries to stimulate economic growth in their respective countries. This can be through, but not limited to, these two channels. Firstly, one of the potential channels through which export diversification boosts economic growth is through mitigating the negative fluctuations in export revenue attributable to

unforeseen changes in prices of the major export products. Secondly, theoretically, multi-product multi-destination exporters contribute the highest share to the export value as compared to single-product single-destination exporters (Chaney, 2008; Bernard et al., 2003). The foregoing has prompted economists to advocate for a policy of export diversification (both product and destination) to circumvent the negative effects associated with export concentration.

The purpose of this Policy Brief therefore is to document the key insights pertaining to Botswana's firm-level export diversification characteristics. This is with a view to subsequently propose possible policy options in order to propel the Government's export diversification initiatives.

BACKGROUND OF THE EXPORT-LED GROWTH STRATEGY IN BOTSWANA

Two critical points have motivated the pursuance of the export-led growth strategy in Botswana. These are (i) the continued heavy reliance on diamond exports and the United Kingdom (UK) as a major destination for these exports, which has made the country susceptible to aggregate fluctuations; and, (ii) the country's aspirations to transition from upper

middle-income status to the high-income status by 2036. Given the small domestic economy, the transition to high income status will only be realised, amongst other things, by the country's ability to access the global markets as exports are necessary for sustained economic growth.

Three key insights are evident from this Figure: (i) firstly, at low export values, firms are almost entirely Single-Product Single-Destination firms; (ii) as firms grow in size (measured in export value), they do so by expanding the number of products to the destination, but not destinations of that product; and, (iii) Finally, at higher level of export values, firms transition into exporting to multi-destinations. Thus, the diversification path as depicted by these results suggest that diversification into new export markets is a key constraint to growth and diversification of Botswana's export bundle. These results may be indicative of the fact that Botswana's exporters are relatively less productive and hence are not

competitive enough to access multiple export destinations - a key result that is in line with existing empirical literature that only the most productive firms will be able to access multiple export destinations due to the fixed costs associated with accessing the export markets (Chaney, 2008). The same sentiments were reiterated in the Botswana 2019 State of the Nation Address, that the existing market access opportunities available for Botswana's firms will not translate into improved export diversification until fundamental challenges are addressed. It can therefore be surmised that fundamental challenges include, *inter alia*, limited firm productivity and competitiveness.

CONCLUSIONS AND RECOMMENDATIONS

This Policy Brief unravels interesting insights when export diversification is viewed through the lens of exporting firms. It is evident that sound institutional arrangements and policies supporting the export-led growth strategy are to a great extent in place in the country. However, the results signal limited firm productivity and competitiveness, which translate into exporters not being able to break into new export markets. On a more granular level, the following initiatives are recommended to spur Botswana's export diversification prospects:

- To transition from the upper middle-income status to high-income status by 2036, the country needs to nurture and develop the multi-product multi-destination exporters through the relevant organisations such as the Botswana Investment and Trade Centre (BITC), Botswana Bureau of Standards (BOBS), Citizen Entrepreneurial Development Agency (CEDA) and Local Enterprise Authority (LEA).
- BITC and the Government of Botswana have seen the need to diversify the export base to include new non-traditional products and markets through the Botswana Exporter Development Programme (BEDP). While the BEDP addresses all aspects of exporter development, which includes assisting all

existing exporters and potential exporters, this Exporter Development approach can be strengthened further by taking into account:

- That exporters are unique in their needs in that occasional exporters are different from permanent exporters;
- The needs of domestic-oriented firms that transition into exporting;
- The needs of single-destination exporters that export solely to the Southern African Customs Union (SACU); and
- The needs of single-destination exporters that transition into multi-destination exporters.
- To enhance strides already realised in improving the country's export diversification prospects, efforts should be focussed on understanding what motivates firms' decisions to utilise existing trade agreements that Botswana has with her trading partners. This will go a long way in ensuring that these market access opportunities are taken full advantage of, in order to improve Botswana's export diversification prospects.
- Finally, to build a stronger and productive economy, the National Productivity and Competitiveness Policy and Strategy needs to be crafted urgently.

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BACKGROUND OF THE EXPORT-LED GROWTH STRATEGY IN BOTSWANA

At the forefront, this would entail a higher inclination towards the utilisation of existing (and newly negotiated) trade agreements between Botswana and her trading partners. Given the foregoing

background, export diversification has been a government developmental objective since the early National Development Plans (NDPs) as evidenced by the following adopted themes in selected NDPs:

Table 1: Selected National Development Plans

Development Plan	Adopted theme
NDP 8 : 1997/98 – 2002/03	Sustainable Economic Diversification
NDP 9 : 2003/04 – 2008/09	Towards realisation of Vision 2016: Sustainable and Diversified development through Competitiveness in global markets
NDP 10 : April 2009 – March 2016	Accelerating achievements of Vision 2016 through NDP 10
NDP 11 : April 2017 – March 2023	Inclusive Growth for the realisation of sustainable employment creation and poverty eradication

To further show the Government's deliberate commitment towards the pursuance of the export-led growth strategy, specific programmes have been developed to spur the export diversification efforts such as the Botswana Exporter Development Programme (BEDP) and the Economic Diversification Drive (EDD), to name just a few. At the forefront is the EDD initiative, whose overall objective is to diversify the economy and export base of the country into sectors that will continue to grow after diamonds have ceased to be a significant contributor to the economy.

ANALYSIS OF THE FIRM-LEVEL EXPORT DIVERSIFICATION CHARACTERISTICS

This Policy Brief relies on a unique dataset consisting of highly disaggregated transactions data, detailing all export transactions that are undertaken by trading firms/traders in Botswana. This data enables the analysis of export diversification at the firm-level, both at product and destination diversification level. The data used is from 2003 up to 2012 and this was the only readily available disaggregated data at the time of doing this research in 2019. It is imperative to indicate that while there exist diversification indices such as the Herfindahl-Hirschman Index, looking at export diversification through the lens of exporting firms unravels interesting insights that cannot be depicted by aggregate indices such as the Herfindahl-Hirschman Index.

Hence, this Policy Brief looks at the firm-level export diversification characteristics, an approach that views export diversification at the micro level.

The results as depicted in Table 2 show that Botswana's exporters have increasingly become diversified over time in terms of products. For example, in 2003, the average number of products per firm was 5.8. This increased to 9.2 products per firm by end of 2012. However, diversification in terms of destinations has been modest, registering an average of 1.3 in 2003 and increasing only to 1.5 destinations per firm by end of 2012. This modest increase is amidst the prevalence of existing trade agreements that Botswana has entered into with her trading partners.

1 In this Policy Brief, multi-product multi-destination exporters are referred to those that export at least one product to at least one export destination.

Table 2: Descriptive Statistics from the Export Transactions Data

	No. of products/firm		No. of destinations/firm		No. of firms/product		No. of firms/ destination	
	mean	median	mean	median	mean	median	mean	median
2003	5.8	2	1.3	1	3.4	2	25	3
2004	6.4	2	1.3	1	3.5	2	25.4	3
2005	7.1	2	1.3	1	4.1	2	29.7	3
2006	7.4	2	1.4	1	4.3	2	28.2	2
2007	7.2	2	1.4	1	4.4	2	29.6	2
2008	7.8	2	1.4	1	4.5	2	29.7	2
2009	7.7	2	1.4	1	4.6	2	31.3	3
2010	8	2	1.4	1	4.9	2	31.5	2
2011	9	2	1.5	1	5.3	2	34.7	3
2012	9.2	2	1.5	1	5.4	2	33.8	3

Source: Botswana – author's calculations based on export transactions data provided by Statistics Botswana.

In an effort to depict the significance on the economy of firms that export at least one product to at least one export destination, commonly referred to as multi-product multi-destination exporters, Table 3 combines information about the number of products exported by a firm and the number of destinations each firm is exporting to.

The results reveal that firms exporting to more than one destination accounted for 91.6 percent of export value in 2012. Secondly, although single-product firms accounted for a sizeable 40.62 percent

of exporting firms in 2012, they accounted for a mere 0.5 percent of the total export value. On the contrary, firms exporting more than one product accounted for the remaining 99.5 percent of the export value. The foregoing results may signal the importance of multi-product multi-destination exporters in contributing to high export values, which may culminate into the country realising its aspiration of attaining a high-income status by 2036. This is in line with the overarching goal of the country's export-led strategy.

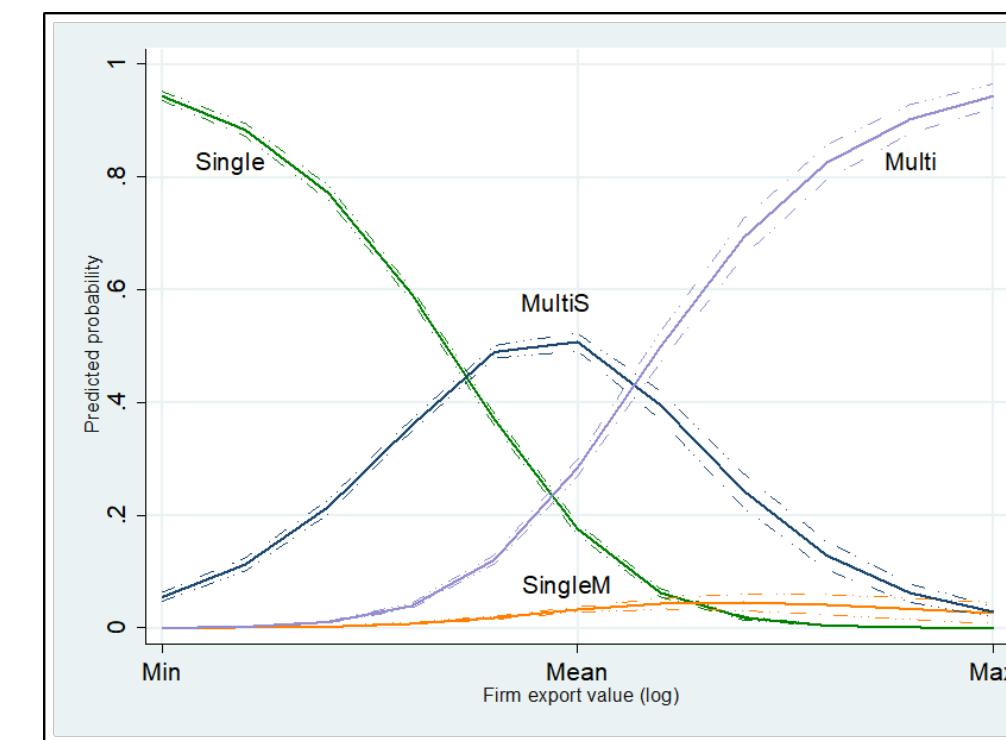
Table 3: Distribution of Exporters and Export Value by Number of Products and Export Destinations, 2012

Panel A: Share of Exporting Firms						
Number of Products	Number of Countries					Total
	1	2	3	4	5+	
1	40.03	0.50	0.05	0.05	0.00	40.62
2	11.92	2.48	0.37	0.09	0.09	14.95
3	5.96	1.65	0.50	0.14	0.05	8.30
4	4.36	0.92	0.28	0.18	0.23	5.96
5+	15.50	7.15	3.26	1.60	2.66	30.17
Total	77.76	12.70	4.45	2.06	3.03	100
Panel B: Share of Export Value						
Number of Products	Number of Countries					Total
	1	2	3	4	5+	
1	0.42	0.04	0.0005	0.0007	0.00	0.5
2	2.18	1.33	37.04	0.25	0.25	41.1
3	1.65	0.26	0.65	0.001	0.03	2.6
4	0.49	0.15	0.87	0.003	1.20	2.7
5+	3.62	2.37	4.80	34.59	7.79	53.2
Total	8.4	4.2	43.4	34.8	9.3	100

Understanding the firm-level export diversification dynamics, using the four selected entry modes² that exporters can choose to enter the export markets, will go a long way in helping to unpack the association between export diversification categories (defined in terms of number of products and destinations) and export value. This analysis helps in unravelling which exporters will contribute the highest export values and hence will help the country in realising its

national Vision 2036's aspirations of transitioning into a high-income status country. One way of interpreting the association between a predictor and the probability of a choice of an entry mode is by computing and plotting predicted probabilities, which were derived after estimating a strategic choice model using the multinomial logit regression approach. The results are as reflected in Figure 1 below.

Figure 1: Analysis of the Predicted Probabilities of Entry Mode Choice



Notes: 1) Dashed lines signify 95 percent confidence intervals. The predicted probabilities are point estimates and thus computing a confidence interval takes into account sampling variability (Wulff, 2015). 2) Single refers to Single-Product Single-Destination; SingleM is Single-Product Multi-Destination; MultiS is Multi-Product Single-Destination; and Multi refers to Multi-Product Multi-Destination. Source: Author's computations.

2 Our definition of the selected entry modes is as follows; If a firm exports one product to one destination, it is defined as Single-Product Single-Destination; If it exports more than one product to one destination, it is defined as Multi-Product Single-Destination; If it exports one product to more than one destination it is referred to as Single-Product Multi-Destination; and finally, a firm that exports more than one product to more than one destination is referred to as Multi-Product Multi-Destination.