Modelling Intergovernmental Fiscal Equalisation in Zimbabwe: Towards Resolving Vertical and Horizontal Fiscal Imbalances

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SUMMARY

The paper deploys a mixed method approach in modelling intergovernmental fiscal equalisation in Zimbabwe. The desirability of the proposed fiscal capacity model is premised on the argument that the anecdotal vertical fiscal imbalance is a structural issue whose antidote is reassignment of revenue or expenditure responsibilities among different governmental tiers. The fiscal capacity model, as we have proposed, is underpinned by five variables, namely, total amount to be allocated as declared in the national budget, poverty index (poverty prevalence rate), population of the area, size of the local economy (revenue/GDP ratio) and the estimated intrinsic value of the sub-soil natural resource endowments of the area.[1]

Vertical fiscal imbalance among governmental tiers is a common feature in both federal and unitary nations. This fiscal imbalance is addressed through various forms of vertical resources redistribution usually in the form of fiscal transfers from a higher order government such as the central government to subnational governments. In light of stylised facts in *Buchanan* (1950)'s federalism and fiscal equity ground-breaking paper, antecedent literature evidence (Liu et al., 2017) have shown that these various fiscal transfers resolve vertical fiscal imbalances, influence horizontal efficiency and address inequality between local government units. However, the criterion for the distribution of fiscal powers and tax revenues from the central government to subnational levels is a source of severe conflict (Ter-Minassian and Mello, 2015). The common centre of contestation as viewed by *Liu et al.* (2017) is a methodological challenge of developing an equitable and transparent framework for a sustainable intergovernmental transfers system that will promote intergovernmental fiscal equalization. In Zimbabwe, this has been worsened by the conflicting objectives of devolution and low fiscal capacities at subnational government levels. On the bases of income quantile share ratio, a more robust alternative of Gini coefficient, this Zimbabwean phenomenal trait mirrors some challenges currently faced by the economies of EU countries where levels of horizontal and vertical inequalities are high and possibly exacerbated by Covid–19 pandemic.2 Therefore, this paper seeks to propose a model for intergovernmental fiscal equalisation that will serve as a tool for promoting a balanced and equitable sharing of fiscal resources across the nation in order to balance regional diversities and fiscal capacity disparities, and promote national development.

The proposed fiscal capacity model as actualised here seeks to fulfil the objective of decentralisation which is to promote an efficient subnational government system with the capacity to deliver services to a heterogeneous citizenry. Liu et al. (2017) concurred that the differences between the capacities of subnational governments to raise revenues could violate horizontal equity among individuals residing in different jurisdictions. Horizontal inequality results in skewed regional development which according to *Nielsen et al.* (2011) and *Findley et al.* (2011)'s evidence promotes forced migration which creates a fertile ground for possibility of regional tensions and violent conflicts due to increased competition for limited opportunities. Therefore, as a practical contribution to the observed dearth in the extant literature of evidence based objective and transparent fiscal equalisation model, our developed and proposed model act as a panacea to avert potential threats related to vertical and horizontal fiscal capacity inequalities.

In the context of the above, an inter-governmental transfers system buttressed by a clear fiscal resource sharing model promote horizontal equity by providing subnational governments of varying fiscal capacities with the ability to provide comparable levels of public services at comparable levels of taxation. The following 5 variables are the parameters within which the proposed model is anchored:

Total amount to be allocated as declared in the national budget

- Poverty index (considered here as the equivalence of the Poverty Prevalence Rate),
- Population of the area,
- The size of the local economy measured as a proportion of the national GDP (determined using the revenue/GDP ratio)
- Estimated value of the natural resource endowments of the area.

RELEVANCE OF THE STUDY

Intergovernmental transfers are the cornerstone of subnational government financing in most developing and transitional economies. The existence of differences in resource endowment, revenue mobilization capacity and the expenditure need among different subnational jurisdictions lead to the horizontal fiscal imbalances (Holm-Hadulla, 2018). In this context, a study by *Chirisa* (2013) concluded that provincial councils and local authorities in Zimbabwe have limited capacity to generate their own funds owing to compressed local economies against ballooning citizen demands. This requires that nationally raised revenue be divided equitably between the national, provincial and local spheres, in proportion to their fiscal capacity and functional competencies. However, there are contestations over the development of an appropriate model to underpin and buttress the transfer system even across Euro Zone.3 In Zimbabwe, transfers to local governments have been viewed more as a 'favour' than an obligation (Marumahoko and Fessha, 2011). From this analogue, the transfers are tied to certain central government policy outcomes which promoted financial dependence and policy subservience to the centre. Although the transfers provided urban councils with budgetary support, the non-existence of an independent institution responsible for determining the transfer and the absence of a constitution-based formula, similar to the one employed in the Division of Revenue Act in South Africa, entrenched local dependence and promoted inequitable asymmetry between councils (Marumahoko and Fessha, 2011).

Zimbabwe provides an important case study to the intergovernmental fiscal equalisation discourse for a number of reasons. Firstly, while fundamental debate has been invested on institutional development and devolution in Zimbabwe following the promulgation of the 2013 constitution, it seems there was very little discussion of how fiscal relationships between the different tiers of government would work in practice and little acknowledgment of the influence of political parties' incongruence on intergovernmental fiscal equalisation. In strengthening the above view, *De Villiers* (2012) submits that the experience of multi-tiered systems shows that much energy goes towards drafting new constitutional arrangements while insufficient attention is given to how, in practice, the different levels of government would cooperate, coordinate and integrate in executing their mandates. Secondly, despite an increase in the scope of local service requirements emanating from devolution, there has been a trend towards recentralisation of local tax sources and in the process depriving subnational governments of key revenue streams. Thirdly, escalated decline of the Zimbabwe economy epitomised by massive deindustrialisation, high unemployment (estimated at over 90%) and a high aggregate poverty prevalence rate (estimated at over 70%) have eroded the capacity of local taxpayers to comply with council taxes. Fourthly, in the absence of a codified framework to underpin fiscal equalisation, the process remains susceptible to political manipulation resulting in other regions getting higher allocations without proper justification.

RESEARCH METHODOLOGY

This study applied the mixed methods research design and data was obtained through in-depth interviews and questionnaires. A total of 16 interviews were conducted in Lupane, Mutare, Harare and Gweru which are provincial capital centres for one metropolitan province and two non-metropolitan provinces. Out of the 8 non-

metropolitan provinces and 2 metropolitan provinces in the country, the four provinces were selected for the study for the following strategic reasons. Matebeleland North has the highest poverty prevalence rate (PPR) of over 70% of which Binga, Lupane and Nkayi has the average PPR of over 75%, qualifying them as the poorest districts in the country (ZIMVAC, 2020). The argument underpinning this study is that an equitable fiscal equalisation framework should be assessed based on its strength in correcting development related disparities and imbalances that may accrue due to variations in the structure and texture of local economies. Although Harare metropolitan province has the least PPR of 36.4%, Harare city council has the highest urban population (2 123132) and an annual urban population growth of 2.6% (Zimstat,2021). This high population puts a huge strain on social services and urban infrastructure.

In the context of the above, Manicaland province is a mineral rich province with vast deposits of diamond and gold. Local citizens have raised a fundamental issue on the need to harness local resources in order to promote the development of the province. According to *Muchadenyika* (2017), despite the extensive extraction of diamond, Manicaland province lags behind in terms of development.

Four key informants selected using the purposive sampling technique were interviewed in each province among them were key local government officials (provincial administrators, chairpersons and CEOs of councils), provincial heads of Zimstat, and selected regional leaders from the civil society and academic life. In addition, a total of 50 questionnaires were administered in each province and the targeted respondents were district administrators, selected district heads of government departments, representatives of civil society including members of the residents and ratepayers association and

residents, HODs social services departments of local authorities in the province and 10 other persons in each province selected on the basis of their experience in public administration or civil service which should be at least 5 years. Qualitative data from interviews was analysed using thematic analysis.

CONCEPTUALISATION OF INTERGOVERNMENTAL FISCAL EQUALISATION AND ASSOCIATED CONCEPTS

Intergovernmental fiscal equalisation frameworks are indispensable to virtually all political systems with multi-level governmental systems**.** The study of fiscal equalisation therefore presents a venerable text on a complex subject with global significance. However, drawing the conceptual boundaries around fiscal equalisation is not only difficult but problematic**.** This is because the exploration of fiscal equalisation presents historical, conceptual and contextual dimensions which can better be resolved through providing a contextual complement to the conceptual perspectives. Fiscal equalisation is largely country specific and tremendously shaped by the macro institutional contexts such as size, number and geographical distribution of subnational governments, the responsibilities and fiscal resources allocated to each jurisdiction, or the mechanisms of power sharing between the national and the subnational governmental levels. *Barrios and Martínez–López* (2016) submit that there are wide arguments on fiscal equalisation but most scholars focus on horizontal and vertical equity, risk sharing and inter-jurisdictional spill over effects and migratory movement in an open market economy.

Musamadya (2017) stress that fiscal equalisation is a transfer of fiscal powers and resources across different governmental

jurisdictions with the view of offsetting variations and diversities in revenue generation capacities or public service cost. To *Martinez-Vazquez and Searle* (2007) and *Muriu* (2013) intergovernmental fiscal equalisation is defined as forms of vertical fiscal decentralisation designed to compensate for socio-economic and fiscal disparities between regions. It's prime objective as viewed by Barrios and Martínez–López (2016) is to allow subnational governmental units to deliver fairly similar levels of public services at a relatively similar tax burden. Barrios and Martínez–López (2016) alternatively defined this scenario as horizontal equity. The European Charter of Local Self-Government stresses that the protection of financially weaker local authorities requires the institutionalisation of fiscal equalisation measures and systems that are designated at solving the problem of unequal distribution of potential sources of finance and of the financial burden they must support. Whilst most scholars have discussed the concept of vertical fiscal asymmetry which brings in the need for vertical equalisation, it is important to note that vertical equalisation should ultimately lead to horizontal equalisation (Holm-Hadulla, 2018).

While horizontal fiscal imbalance requires equalization transfers, vertical fiscal imbalance is a structural issue and thus needs to be corrected by reassignment of revenue and expenditure responsibilities between the different orders of government. According to *Fenna* (2008) vertical fiscal imbalance therefore describes the variance between a central government's revenue and expenditures against those of regional governments. *Holm-Hadulla* (2018) characterises a vertical fiscal imbalance as a situation in which revenues do not match expenditures for different levels of government. Typically, the variance is in the favour of the central government, which provides grants to cover the subnational government's fiscal deficit. Conversely, a horizontal fiscal imbalance emerges when subnational governments have different abilities to raise funds from their tax bases and to provide services. This creates differences in net fiscal benefits, which are a combination of levels of taxation and public services.

In the context of the above Holm-Hadulla (2018) argues that the growth in subnational expenditure responsibility versus rigid revenue endowment often led to the increase in disparities between communities and regions in terms of their capacity to fund their expenditure programs, making the subject of fiscal equalization topical. It is a common principle therefore that functional decentralization should automatically be followed by the vertical redistribution of public fiscal resources. Economic disparities explained in terms of variances in subnational GDP per capita represent the biggest factor behind unequal access to public services across a nation. They translate into variations in tax-raising capacities. Consequentially, this renders it difficult or impossible for some subnational jurisdictions to deliver adequate service levels. The disparities vary considerably across nations. Sweden and Japan, for instance have marginal disparities and slight geographical concentration of economic wealth while the Slovak Republic and Turkey show wide disparities. Muriu (2013) summed up that redistribution is both the basis and direct consequence of equalisation, particularly where decentralisation has created disparities between regions resulting in limited capacity to provide a nationally acceptable level of service.

FISCAL EQUALIZATION FRAMEWORKS IN SELECTED COUNTRIES

As aforementioned, fiscal equalization is the transfer of fiscal resources across jurisdictions mainly to offset skewed cost of public services

or capacity to raise revenue. Its principal intention is to necessitate sub-central governments to offer their citizenry with same set of public services at same tax burden. No fiscal equalisation would be required if subnational governments have fiscal capacity to sustain their service delivery requirements. However, within a country there are some jurisdictions with high tax revenue and low cost of public services, while on the stark opposite, some jurisdictions have high cost of public services and low tax revenue. Thus, fiscal equalization seeks to address such anomalies through an explicit redistributive programme with the view to achieve three central public finance issues: efficiency, equity and stability.

In addition to equalization and raising capacity of revenue per capita, tax and public goods provision per beneficiary, *Shah* (2013) further provide two additional main reasons for fiscal equalization. First, it acts as a safety net by providing insurance against employment and asymmetric income shocks. Second, it avoids fiscal externalities leading to capital and/or labour misallocation across a country's regions. Of these three main reasons, across all countries, Barrios and Martínez–López (2016) observe equity as

the only driving force for fiscal equalization which gives equal access to public services and similar tax raising capacity across jurisdictions. Fiscal equalization transfers must achieve both vertical and horizontal equity across a country's provinces and local fiscal disparities. Broadly, equalization is driven by 1) needs; 2) costs; and 3) revenue raising abilities of relevant provinces and local authorities of a country. But specific objectives of equalization and implied equalization standards vary across countries. For example, in Australia it has the capacity to provide equally standardized public goods and services with the same operational efficiency and revenue effort whereas in Switzerland it seeks to provide minimum acceptable levels of services without imposing much heavier tax burdens in some cantons in comparison to others. Also, in Germany it is intended to equate differences in financial capacities amongst states while in Canada, at comparable levels of taxation across regions, it achieves reasonably comparable levels of public goods and services (Chen et al., 2018). A summary of equalization standards and practice pursued by some selected countries is given in *Table 1–3*.

In selected OECD countries the effect of fiscal equalization on equity in presented in

Table 1

FISCAL EQUALIZATION STANDARDS CHOICE OF SELECTED COUNTRIES

Equalization Standard	Non-General Revenue Sharing System)	National Average or Fractional	Complex Statistical Criteria
Determine Pool only			
Determines Allocation only	UK and most developing countries such as India, Brazil, Thailand	China, Australia, Russia, Switzerland	Indonesia use Williamson's Index
Determines both Pool and Allocation		Denmark Germany, Canada, Finland, Sweden	

Source: Shah (2014)

Table 2

**REGIONAL LEVEL FISCAL EQUALIZATION PRACTICE
IN SELECTED OECD COUNTRIES**

Fiscal Equalization Program	Australia	Canada	Germany	Switzerland
Legal Status	Federal Law	Constitution	Constitution	Constitution
Paternal or Solidarity	Paternal (Vertical)	Paternal (Vertical)	Solidarity (horizontal)	Mixed
Total Pool Determination	Ad hoc	Formula	Formula	Ad hoc
Allocation	Formula	Formula	Formula	Formula
Fiscal Capacity Equalization	Yes, Representative Tax system (RTS)	Yes, RTS	Yes, Actual revenues	Yes, major Macro tax bases
Expenditure Need Equalization	Yes	No	No, only population size and density	Some
Political consensus	No	Yes	Yes	Yes
Program complexity	High	Low	Low	Medium
Sunset clause	No	Yes (5 years)	No	No
Who recommends	Independent agency	Intergovernmental committees	Solidarity pact II	Federal government
Dispute resolution	Supreme Court	Supreme Court	Constitution court	Supreme court

Source: Authors' compilation

Table 3

**LOCAL LEVEL FISCAL EQUALIZATION PRACTICE
IN SELECTED NORDIC COUNTRIES**

Country	Fiscal Capacity Equalization	Expenditure Need Equalization
Finland	Solidarity RTS program with 37% tax rate for above national average per capita fiscal capacity (PCFC); subsidy rates (SR) of 100% if PCFC is less than 92%	Central program of cost equalization for health, welfare and education and urban/rural cost difference >65% national average
Denmark	Mixed central plus Robin Hood program with 85% tax rate if PCFC exceeds 115%; SR of 85% if PCFC is less than 90% and 45% if otherwise.	Solidarity program
Sweden	Same as in Denmark but SR is 95% if PCFC exceeds 115%	Solidarity program of cost equalization for 9 services
Norway	Robin Hood program covering major taxes except property tax with 60% tax rate for average PCFC. SR 95% for PCFC< 90% and 60% otherwise	Solidary program plus special central grants to smaller local government (LGs), northern counties and fast-growing LGs

Source: Authors' compilation

Table 4. For most countries with a European flavour, fiscal equalization has a substantial disparity-reducing effect. On average, equalization reduces fiscal disparities, as measured by the coefficient of variation of fiscal capacity before and after equalization, by almost two thirds, from 29% to 10% (Shah, 2013). Similar effects are shown by the Gini coefficient. The lowest revenue raising capacity rises from 57 to 86% of the national average, the highest revenue raising capacity is reduced from 155 to 122% of the national average across countries. Revenue raising capacity after equalization is never below 64% for the poorest jurisdiction (Switzerland) and never above 175% (Denmark) for the wealthiest. In some countries' revenue raising disparities are virtually eliminated

Table 4

FISCAL DISPARITIES AND DISPARITY REDUCING EFFECT OF FISCAL EQUALIZATION IN SELECTED OECD COUNTRIES

Country	Before equalisation (in percentage)				After equalisation (in percentages)				Equalization effect (difference pre/ post-equalization, percent points)	
	Variation coefficient	Gini coefficient	Highest capacity	Lowest capacity	Variation coefficient	Gini coefficient	Highest capacity	Lowest capacity	Variation coefficient	Gini Coefficient
Federal/regional countries										
Australia	16.8	5.0	103.8	79.8	0.0	0.0	100.0	100.0	16.8	5.0
Austria					4.2	2.0	106.9	93.2		
Canada	29.8	10.0	177.1	75.0	20.1	7.0	156.9	92.9	9.7	3.0
Germany (2005)	13.0	6.0	116.5	67.0	2.7	2.0	104.5	97.4	10.3	4.0
Italy	39.0	21.0	146.0	24.0	6.0	10.0	115.0	89.0	33.0	11.0
Spain	26.5	15.0	142.2	67.2	10.1	4.0	117.4	83.7	16.4	11.0
Switzerland	31.8	15.0	173.0	46.0	23.2	11.0	159.0	64.0	8.7	4.0
Unitary countries										
Denmark	16.0	8.0	134.0	62.0	6.0	4.0	175.4	86.4	10.0	4.0
Finland	17.7	11.0	143.0	78.8	4.2	3.0	104.8	95.3	13.4	8.0
Japan	36.0	20.0	183.0	58.0						
Norway	23.0	13.0	142.0	64.0	8.0	5.0	118.0	93.0	15.0	8.0
Portugal	90.0	34.0	331.0	26.0	28.0	14.0	138.0	65.0	62.0	20.0
Sweden	10.0	6.0	118.0	84.0	0.0	0.0	103.0	91.0	10.0	6.0
Turkey	39.0	22.0	130.0	2.0	14.0	6.0	107.0	64.0	25.0	16.0
Average	29.9	14.3	156.9	56.4	9.7	5.2	123.5	85.8	19.2	9.1

Source: Own Compilation using OECD data

such as in Austria, Germany and Sweden. Horizontal arrangements have a slightly stronger equalization effect per GDP percent point used for equalization than vertical equalization (not shown in the table). Fiscal disparities after equalization are clearly below economic disparities as measured by regional GDP, that is, public services are more equally distributed across jurisdictions than economic wealth. The results shown in *Table 2* are in line with analyses for selected countries (Politi and Mattos, 2014).

DESIGN OF REVENUE AND COST EQUALIZATION IN SELECTED OECD COUNTRIES

As presented in previous tables *(Tables 1–4)*, slightly more revenue equalization design is of the horizontal or 'solidarity' type. Representative Tax System (RTS) or potential tax raising capacity with a broad tax base (personal income tax, corporate income tax, property tax) are the most common form to assess fiscal capacity, but other systems also exist, including population density, household income or proxies for economic activity (Politi and Mattos, 2014). In a few countries actual tax revenue is used for assessing revenue raising capacity, and tax revenue is distributed per capita. Most transfers are close- ended, that is, a ceiling is usually provided on the total amount of grants, or total funds are determined by tax sharing formulas. According to Barrios and Martínez– López (2016) the marginal equalization rate, (or equalization tax, tax back or compensation rate) is applied to mean that the amount of money a sub-central government loses (wins) if it increases (decreases) its own tax revenue by 100 monetary units varies considerably across countries; on average out of an additional 100 units of own tax revenue sub-central jurisdictions have to dedicate 70 units to equalization. Effective

rates vary according with tax bases and to what percentage they are included in the calculation of the fiscal capacity indicators.

ANALYSIS OF FINDINGS

This section analyses data from key 16 informant interviews, 4 from each of the 4 selected provinces and 50 respondents from each of the selected 4 provinces on the five selected variables which forms the basis of the formula. The modalities and techniques of data are as given in the aforementioned methodology section.

Demographic characteristics of the respondents

Of the total respondents, 37% were females whilst 67% were males. In terms of age, respondents in the age category 18 to 35 accounted for 47% of total respondents whilst in the category 36 to 65 years, they accounted for 53%.

Understanding of the variables among respondents

The issues around this theme were focused on testing the extent to which the respondents understood the basis and utility of the five variables derived by the researchers and upon which the formula is anchored. At the same time the respondents were given the leeway to propose additional variables or with justification make a suggestion to remove a variable. The 5 variables are: total amount to be allocated as declared in the national budget; poverty index (considered here as the equivalence of the Poverty Prevalence Rate); population of the area; size of the local

economy measured as a proportion of the national GDP (determined using the revenue/GDP ratio); estimated value of the natural resource endowments of the area.

65% of the survey respondents and 79% of the key informants representing an average 72% understood the stated variables as the basis upon which the model should be developed whereas an average of 28% representing both categories of respondents, largely constituted by residents (76) could not understand the variables.

65% of the key informants stressed that it was important to test the variables across the provinces because of the generic variations in the application of the variables in the different provinces. An academic staff from the Midlands State University stated that resources endowments across provinces produce wide variations that may distort the objectives of devolution in the absence of equity frameworks. The GDP of the country is largely supported by the extraction of natural resources and hence there is need to determine how natural resources intrinsic value variations from one province to the other could potentially trigger growth disparities across different subnational regions. An expert in Harare viewed that there is need to develop agreed frameworks of measuring some of the variables such as the PPR. Her argument was that poverty is very difficult to qualify and quantify and hence many frameworks has relied on UN standards.

Importance of the five variables analysed across the three selected provinces

From the 16 interviews with experts and 200 questionnaires on the 5 variables forming the bases of our proposed model the study established the following. From experts across the 4 selected provinces, 12 (75%) suggests

the total amount to be allocated as declared in the national budget to be raised to a figure between 8% and 10% to cater for ever rising expenditure needs due to dwindling provincial and local authorities' revenue bases. The decline is partly because recentralisation of some revenue sources that used to be collected by local authorities such as vehicle licensing. This expert view was also reinforced by results from questionnaires, where 87% of the 200 respondents argued that the current 5% is inadequate to address the needs of 10 provinces and 92 local authorities (this is notwithstanding the local revenues sources, which, as argued earlier remains substantially subdued).

Questionnaire response results presented in *Figure 1* by province and for the entire sample of 200 respondents show poverty prevalence, GDP, were highly prioritized in Matabeleland North and Harare provinces respectively while both Manicaland and Midlands provinces valued natural resources more. Overall, harmonizing all the responses across provinces the order of variables prioritization was as follows: 1) natural Resources; 2) poverty prevalence rate; 3) GDP and 4) population size and density.

We observed almost similar findings from the 16 expert interviews done across the selected four provinces where, unlike in the case of questionnaires, poverty prevalence rate and GDP interchange the second and third position whereas the first and last positions remain the same, as presented in *Figure 2*.

Transparency of current fiscal decentralisation frameworks

This section sought to analyse the views of respondents on the transparency of current fiscal decentralisation frameworks focusing on specific national government grants to local

Figure 1

FINDINGS FROM THE QUESTIONNAIRE RESPONSES
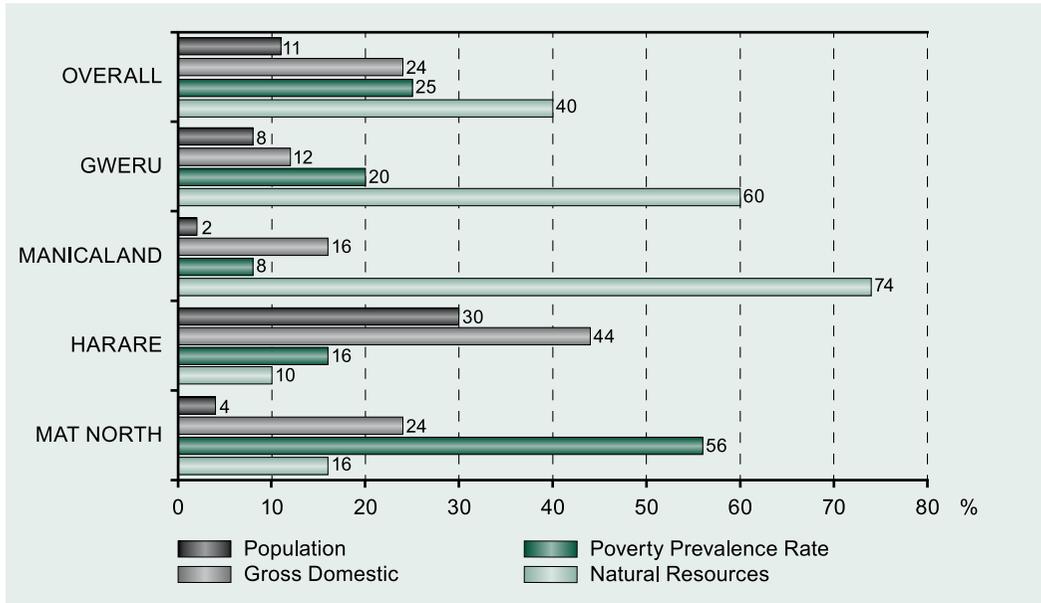
Source: Own Computations from Primary Data Sources

Figure 2

RESULTS FROM THE EXPERT INTERVIEW RESPONSES
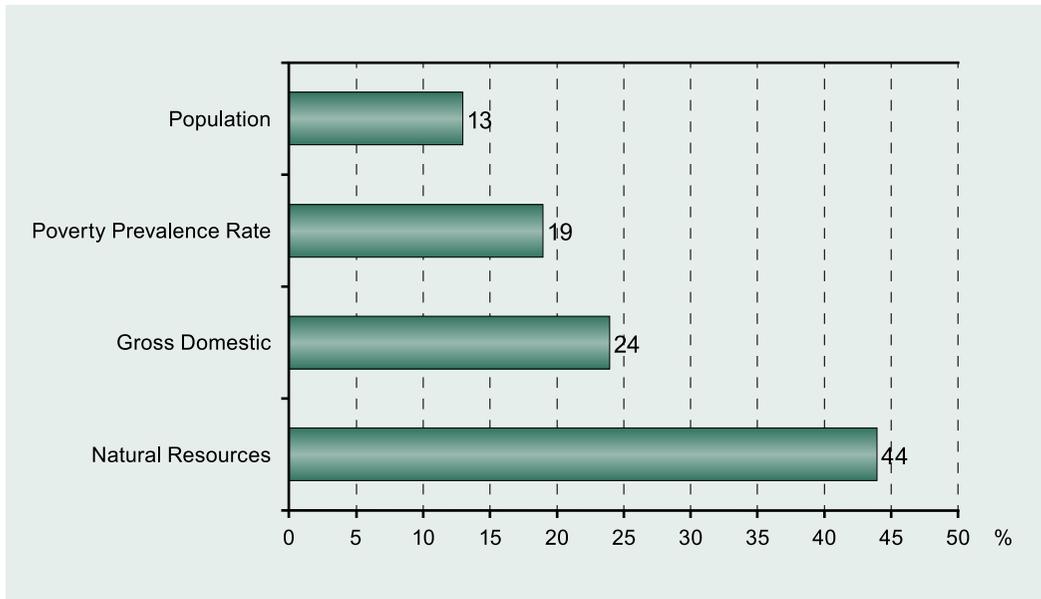
Source: Own Computations from Primary Data Sources

authorities. Respondents identified various grants that include the infrastructure grants under the Public Sector Investment Programme (PSIP), Roads grant from ZINARA, Health grant, and other unconditional grants from central government. All these grants are being distributed in an ad hoc manner. The principal view is that while these are structured grants with statutory basis, the allocation frameworks remain weak, unstructured and in some instances influenced by political considerations leading to inequity.

Over 76% of the survey respondents indicated that the disbursement of the grant failed to achieve allocative efficiency in public health delivery particularly in times of pandemics like the current Covid–19 era. Key among the limiting factors was a negatively skewed and intermittent distribution system that made the receivable grant to individual local authorities largely unpredictable. In the same context a drastic reduction in intergovernmental financial transfers has not either been explained by the national government or accompanied by an increase in the revenue powers of urban councils for example powers to review health fees in council health institutions.

Interview respondents were asked to assess the transparency of the current fiscal decentralisation frameworks. Over 75% were of the view that the current fiscal decentralisation frameworks lacked transparency in their operation. None of the beneficiary local authorities could explain the scientific basis in the allocation of road funds from ZINARA. Other respondents indicated political bias towards provinces that have some inclination with the disbursing authority as they seem to have received more. An academic from Lupane University viewed that '*the adhoc system leads itself to political manipulation*'. The remaining 25% had no idea of how funds are being distributed currently. This shows that

there is need for a scientific and transparent formula to guide the disbursements.

As aforementioned, the respondents indicated that no local authority was in the picture of how much it was going to receive either from the national government or from ZINARA. The respondents saw the system leading to uncertainties on the local government institutions as none would be able to prepare in advance. Resultantly, '...*fiscal planning and budgeting are discouraged*' (Bahl, 2000). The remaining 40% believed that central government can use the adhoc system to manage its budget deficit there by reducing what it gives to local authorities at will. A Residents Association representative was of the opinion that it is the ad hoc system that has led us to where we are (a situation where local authorities are no longer receiving statutory grants in line with statutory provisions). Despite its apparent flaws as seen by the respondents the ad hoc system continues to get favour with central governments as they see the ability to use their own discretion and flexibility. However, this scenario does not present the benefits expected from fiscal decentralisation

PROPOSED MODEL OF FISCAL EQUALISATION IN ZIMBABWE (THE FISCAL CAPACITY MODEL)

The model proposed here is derived from the fiscal capacity approach and has been used to some extent in the literature (Chirisa, 2013). To the best of our knowledge no such robust approach has not been pursued in the Zimbabwean context. However, its adaptation to the Zimbabwe situation is based on the triangulation of literature and the study findings. The fiscal capacity approach is the measure of revenue raising abilities of government to provide standardized goods

and services relative to the costs of service responsibilities. It is used to:

❶ Monitor and compare trends in subnational governments' fiscal and economic situation.

❷ Provide information about assessing the strength of the regional economy.

❸ Forecast the impact of structural change in regional economy.

❹ Guide central government in assisting subnational governments by different grants.

A generic representation of the fiscal capacity measure in mathematical notation is:

$$FC^i = \left[\sum_{j=1}^{R}(t_j^s B_j^i)\right] - \left[\sum_{k=1}^{Z}(c_k^s E_k^i)\right]$$

where FC^i is the fiscal capacity of region i. The first bracket is revenue-raising ability of subnational government i. In the first bracket, B_j^i is the tax base for revenue item j in i and t_j^s is the standard tax rate for item j. The total number of revenue items is R ($j=1…R$). The second bracket represents the total costs of expenditure responsibilities of the government in region i. In the second bracket E_k^i denotes expenditure item k in i and c_k^s is the standard cost of expenditure item k. The total number of expenditure items is Z ($k=1…Z$).

There is a controversy surrounding the measure of fiscal capacity. The application of the fiscal capacity measure in some countries, like Canada, concentrates only on the revenue side. The treatment of fiscal capacity concept solely as the revenue-raising ability of subnational governments can be observed in academic world as well (Martinez-Vazquez and Boex, 1997a and 1997b). However, the United States Advisory Commission on Intergovernmental Fiscal Relations have developed a new methodology to incorporate expenditure side of the public finances into the fiscal capacity concept and updated its 1962 estimates fiscal capacity for U.S. states (ACIR, 1962) and in the subsequent publications (ACIR, 1986, 1990a, 1990b). This paper proposes this new methodology for estimating fiscal capacity measure covering both revenue and expenditure components of the fiscal capacity measure. Revenue raising ability is based on either of the two approaches namely 1) macroeconomic approach or 2) microeconomic approach. In microeconomic approach, the Representative Tax System (RTS) is a widely used measure of revenue raising ability. RTS consists of national average tax rates applied to all commonly used tax or revenue bases.

The second component of the fiscal capacity measure is estimating the cost-of-service responsibility or expenditure need. Although RTS provides information about revenue raising ability of subnational governments, it is silent about the variation of costs for service delivery across subnational governments. The representative expenditure system factors in the variation of service delivery cost across subnational governments into the fiscal capacity measure. There are three factors responsible for the variation of costs among subnational governments as follows:

• The range and types of services subnational governments must provide,
• The prices of the inputs used to produce public services, such as wages and salaries,
• Factors that determine the scope of the services provided, such as demographic structure of the population (number of school age children).

The five basic elements of the RTS to be considered are:

❶ the revenue coverage,

❷ the classification of revenues into separate sources,

❸ the definition of a Standard Tax Base for Each Revenue Source,

❹ the definition of a Standard Tax Rate for Each Revenue Source and

❺ the Estimation of RTS Revenues.

The methodological components of the RTS in the existing literature and anchoring this study are:

❶ determination of the tax source,
❷ defining and estimating the tax base,
❸ calculating the representative rate,
❹ estimation of tax capacity and
❺ estimating the tax effort.

CONCLUSION

On the backdrop of observed vertical and horizontal fiscal inequalities in both developed and developing economies across the globe, the study provides a model for intergovernmental fiscal equalisation. The thrust of the model is to equalize vertically and horizontally in order to resolve fiscal imbalances between the three tiers of government and in the process improve the capacity among different subnational governments to provide services at comparable tax levels and expenditure needs. The key variables and factors that underpin the proposed model should be further investigated through structured research processes and broader stakeholder involvement. The issues emerging from the study are of paramount importance to all countries across the globe given that the Gini coefficients and income distribution share ratios of most economies points towards rising inter-and-intra-regional inequalities overtime especially in the aftermath of pandemics like global great depression, financial crisis and Covid–19, to mention just a few. The limitation of this study is unavailability of provincial disaggregated secondary micro-time-series data to apply to our formula to calculate the required indicators. As a recommendation for further studies, most developing countries across the globe must find means of collecting and make available disentangled provincial micro-data. ■

NOTES

[1] The authors gratefully acknowledge financial support from the Commonwealth Local Government Forum (CLGF)'s Research Grant towards this study.

[2] Compared to an EU28 average income quintile share ratio for 2018 of 5.12, the ratios from Eurostat in descending order available at http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_di11&lang=EN showed that European countries with highest income inequalities are in Kosovo (15.6), Turkey (8.7), Serbia (8.6), Bulgaria (7.7), Montenegro (7.4), Romania (7.2), Lithuania (7.1), Albania (7.0), Latvia (6.8), North Macedonia (6.2), Italy (6.1) Spain (6.0), Greece (5.5), and Portugal (5.2). Income quantile share ratio, unlike Gini coefficient, measure how many times more does the 20% of the population with the highest income receive as compared to what the 20% of the population with the lowest income have.

[3] See for example information we presented in *Tables 1–4*.

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