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# IDENTIFICATION OF DISTRICT LEVEL PROSPERITY INDICATORS OF SRILANKA

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Dissertation submitted in partial fulfillment of the requirements for the degree of Master of Science in Operational Research

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**Declaration of the Candidate** 

I declare this is my own work and this dissertation does not incorporate without any acknowledgement

any material previously submitted for a degree or diploma in any university or other institute of higher

learning and to the best of my knowledge and belief it does not contain any material previously published

or written by another person except where the acknowledgement is made in the text.

Signature:

**UOM Verified Signature** 

Date: 13.02.2014

K.R.Rajamohan

1

Certification of the Supervisor

I have supervised and accepted the thesis titled "Identification of district level prosperity indicators of Sri Lanka" for the submission of the degree.

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I dedicate this Thesis to my parents, for believing in me and supporting me throughout my life's journey to achieve my goals.



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#### **ABSTRACT**

There are several indicators to measure the economic development of a nation such as Gross Domestic product (GDP), Human Development Index (HDI) and Human Poverty Index (HPI) etc. In 2008 the Central Bank of Sri Lanka introduced an index to measure the provincial prosperity of Sri Lanka. The suitability of this indicator in measuring the provincial development is questioned by many critiques, due to various drawbacks. Further, this index cannot be used for district levels This study aims to suggest the Human Development Index (HDI) and Human Poverty Index (HPI) for the districts of Sri Lanka using the national level data and further this study aims to identify the weaknesses of the present Sri Lanka's prosperity index (SLPI) and formulate a new refined prosperity index for districts in Sri Lanka. The HDI and HPI are estimated using the methodology proposed by the Human Development Report of the UNDP and the districts were ranked according to the estimated HDI and HPI values. The suitability of these indicators is verified by the variation of HDI and HPI between the districts in specific time periods. The new refined prosperity index was formulated by correcting the conceptual weaknesses in SLPI. New variables were included in the new refined index. These variables were statistically analyzed using principal component analysis and factor analysis. The research findings reveal that the HDI has several weaknesses in measuring the regional development. The weaknesses are the inappropriate estimation methodology of HDI and the slowly changing nature of the variables included in the HDI. Another weakness is the low weight given to the GDP index of the HDI, which covers more aspects of development. The HPI shows significant variations throughout the time periods as well as between districts. This is due to the appropriate estimation methodology of HPI and the suitability of variables included in the HPI to capture the multi-dimensional perspective of the poverty. Therefore, instead of HDI, the HPI could be used as an indicator of regional poverty levels. The new refined index is a conceptually stronger index than the SLPI as it covers all aspects of prosperity and provides the sector performance of different districts.

**Keywords**: Factor analysis, Human Development Index, Human Poverty Index, Principal component analysis, Sri Lanka Prosperity Index.

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