# The Contribution of Micro-Enterprises in Nepalese Economy <sup>1</sup>

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### **Abstract**

Micro-enterprises in Nepal are vital, fueling employment, GDP growth, exports, and more. In this context, this paper aims to deal with investment, income and employment (IIE) analysis of Micro-enterprises in Nepal. Using descriptive statistics and multiple regression model, the study has employed cross-sectional data set collected from enterprises survey in the Ward No.14 of Kathmandu Metropolitan City. In the survey, the sample size was 30 small enterprises including tea stall, sweets, haircutting, meat shops, and vegetables. In the enterprises, high investment that is 80 percent have generated high income level that is multiple times of investment in retail enterprises, except hair cutting, meat shops, boutique, sweets and vegetables. In employment generation, all enterprises have positive implications. Besides, the model shows positive relationship between income, investment and employment. However, it is statistically insignificant because p value is greater than 0.05. However, in real life, this is significant because the main attractive investment fields are hair-cutting and meat shops. It is clear that investment output depends on the presence of such business units in their vicinity. The relationship between income and investment is statistically insignificant (p-value 0.416 > 0.05), and the same is true for income and employment (p-value 0.445 > 0.05). The number of employees and the type of business are closely related (p-value 0.000 to 0.01). Therefore, the micro-enterprises are a prominent economic activity to generate self-employment, income generation and promoting small scale investment. This study result significantly contributes on generic perception of the policy makers on enterprises development

<sup>&</sup>lt;sup>1</sup>Cite this article as: Khatri, B. B.; Bista, R. B. & Acharya, K. R. (2023). *Contemporary Research: An Interdisciplinary Academic Journal*, vol. 6 (2); DOI: <a href="https://doi.org/10.3126/craiaj.v6i2.60245">https://doi.org/10.3126/craiaj.v6i2.60245</a>
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statistically to continue enterprises development programs and policy of the government of Nepal and Kathmandu Metropolitan city to boost up local economy as well as national economy. Furthermore, the study result provides a valuable lesson learnt to create doing business environment of micro-enterprises within Kathmandu for building a strong local supply and value chain system rather than prohibition policy.

*Key words:* Employment, Income, Investment, Kathmandu Nepal, Micro-enterprises

Introduction

Micro-enterprises hold a significant position in the economic landscape of developing nations such as Nepal (UN, 2020). Globally, micro, small, and medium-sized enterprises (MSMEs) are responsible for more than 50 percent of employment opportunities and contribute no less than 35 percent to the gross domestic product (GDP) (WB, 2017). Of the 3,228,457 individuals who were engaged in the workforce during the year 2018, more than 2.5 million or 84.7 percent are employed by Micro, Small, and Medium Enterprises (MSMEs). The majority of individuals employed at MSMEs (69.3 percent) are working in micro enterprises within the nation of Nepal. Nevertheless, MSMEs contribute a noteworthy 22 percent to Nepal's annual Gross Domestic Product (GDP) according to the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP, 2020). These enterprises are instrumental in generating employment opportunities and contribute substantially towards the overall output, reducing poverty and income inequality while simultaneously promoting balanced regional development (Reeg, 2015).

According to the Industrial Policy 2010, based on investment and the nature of the industry, industries are classified into five groups: micro-enterprises, traditional and other cottage industries, small-scale industries, medium-scale industries, and large-scale industries (MoI, 2010). In the context of the Industrial Policy 2010, a micro-enterprise is defined by several key characteristics. Firstly, it is limited by a fixed investment amount of up to NRs 200,000, excluding any investments in land or buildings. Additionally, such an enterprise must be self-managed by its entrepreneur(s). Furthermore, the micro-enterprise may employ no more than nine individuals, inclusive of the entrepreneur(s). The annual transaction amount for this type of enterprise must also be less than NRs 2,000,000. Finally, if power or energy is utilized, it must be limited to 10 KW or less.

The policy on Microenterprise in 2008 has provided a definition of the term "Microenterprise." It encompasses industries, enterprises, and service businesses, with a

focus on agriculture, forest, tourism, mines, and handicrafts. In order to meet the criteria, the manufacturing industry or enterprise must involve a fixed capital investment of no more than two hundred thousand rupees, excluding house and land. On the other hand, a service enterprise or industry must have a fixed capital investment of no more than one hundred thousand rupees. Additionally, the entrepreneur must be directly involved in management. The maximum number of workers employed, including entrepreneurs, should not exceed nine. Moreover, the annual turnover of the Microenterprise should be below two million rupees. If the Microenterprise utilizes an engine or equipment, it must not exceed five kilowatts. Provided that notwithstanding anything contained above, any industry or enterprise that manufactures liquors, cigarettes, or other tobacco products or for the establishment of which approval has to be taken will not be considered a microenterprise (MoICS, 2008).

By the above definitions, the definitions differ in their capitalization levels, sales, number of employees, and incomes (Storey, 1994). Nepal's Industrial Enterprise Act 2020 categorizes business sizes by fixed capital investments. The Industrial Enterprise Act 2076 (2020) defines a micro-enterprise as an enterprise where the entrepreneur himself/herself is involved in the operation and management of the enterprise. The maximum number of workers in an enterprise, which is categorized as a cottage enterprise, is nine, including the entrepreneur. The fixed capital, which excludes house and land, does not surpass two million rupees, and the annual turnover is less than ten million rupees. Such enterprises are founded on traditional skills and technology, emphasizing specific skills or local raw materials, technology, arts, and culture, resulting in a labor-intensive approach. The engine, equipment, or machine used by such enterprises, if any, must consume no more than 20 KW of electric energy and fuel. The capacity of electric energy consumed by the engine, equipment, or machine used, if any, is not more than 50 KW for small enterprises, except for micro and cottage enterprises, which have a fixed capital of less than 150 million rupees.

Micro-enterprises can be established with minimal investment, as is typical of cottage enterprises in Nepal, where products are created using traditional skills and machines within the home. Moreover, Micro and Small Enterprises (MCSEs) can be analyzed as a cohesive group, as government agencies also evaluate them through a similar lens. Within Nepal, a significant majority, approximately 94 percent, of registered entities fall under the small and medium categories (CBS, 2021). Furthermore, nearly

500,000 firms are registered with the former Department of Cottage and Small Industries and the district-level offices of the Cottage and Small Industries Development Committee (DoI, 2021). According to the 2018 National Economic Census data of Nepal, there exist 923,000 establishments, nearly 98% of which are single entities that operate as independent businesses. Out of the total, 50% of the establishments are registered, while 30% are female-owned, and 55% are owned by young persons who are aged below 40. On average, each establishment employs 3.5 individuals, including the owner (Irwin & Ibrahim, 2020).

According to the 2021 National Population Census, the total population of Nepal was 29,164,578 in 2021, and the annual average population growth rate was approximately 0.92 percent and average household size was 4.37. Most people (66.2 percent of people) live in urban areas, and only 33.8 per cent people live in rural areas (NSO, 2023). Nepalese economy is dominated by agriculture with 50.1 percent of economically active people engaged in agriculture in 2021. The contribution of nonagriculture activities to the GDP is gradually increasing in recent years, while the contribution of agriculture to GDP has gone down to 23.95 percent in the 2022 (NRB, 2022). The census results show that there are 627,887 (9.4 %) households operating small scale enterprise other than agriculture with no paid employee. Among such households, 137,644 (21.9 %) operate cottage industry, 310,651 (49.5 %) operate trade/business, 34,656 (5.5 %) operate transportation, 69,177 (11 %) operate service related and 75,559 (12 %) operate other types of such small-scale enterprise in the country. Out of the total 15,689,777 economically active populations, 11,038,105 persons (70.35 percent) are usually economically active and 4,651,672 persons (29.65 percent) are not usually economically active.

The current economic situation in Nepal is characterized by a dominant primary sector, sluggish growth, and a widespread state of deprivation. The challenging and crowded terrain, coupled with limited exploitable natural resources and a scarcity of skilled labor, further constrains the potential for rapid development, leaving uncertain and restricted options. Moreover, the industrial sector remains underdeveloped, being composed solely of small-scale industries (Bajracharya, 2007). It is noteworthy that micro-enterprises have gained increasing popularity in contemporary development agendas worldwide, particularly in developing nations, as a means to address income and employment opportunities. The establishment of micro-enterprises in rural areas has

proven to be a successful approach to generating income and facilitating employment (UNDP, 1998).

The expeditious and effective advancement of a nation's industry is heavily reliant upon the aptitudes and obligations of its entrepreneurs. The attributes of these individuals are directly impacted by their individual traits, socio-economic surroundings, commercial milieu, governmental backing, and sundry other determinants. When it comes to fostering entrepreneurship in India, it is patently heading in a constructive trajectory; nevertheless, it is imperative to stimulate entrepreneurship efficaciously in the agricultural domain (Jha, 2010).

Nepal is a nation that boasts a plethora of micro and small enterprises (MSEs) which are ubiquitous, ranging from the bustling center of Kathmandu to the highlands and even in the remote Terai regions. These MSEs hold a pivotal role in the economic and social development of Nepal by providing employment opportunities and generating revenue. Micro enterprises, often owned and operated by women, play a crucial role in providing necessary income to impoverished households. Furthermore, MSEs contribute to the enhancement of local products and services (ILO, 2005).

This study aims to investigate the correlation between investment and income in micro-enterprises, and to scrutinize the profitability of investment. In this context, the study has devised two hypotheses for statistical testing: i) there is a close relationship between investment and income in micro-enterprise in Nepal, and ii) Hair cutting and meat shops are most the lucrative micro-enterprises in Nepal.

#### **Materials and Methods**

This study is grounded on a descriptive cum analytical research approach, which is complemented by both primary and secondary data. Within the context of the world's least developed countries, the micro enterprise represents a significant and efficacious tool for reducing poverty and unemployment levels. This instrument has been widely tested throughout the world, revealing that additional employment can be generated at a minimal cost - a primary concern for economists. Given the chronic scarcity of resources in the least developed countries, it is not possible to conduct massive investment, as the big push theory would suggest. Nonetheless, a small level of investment is feasible in Nepal and other countries similarly situated. Previous research has demonstrated a positive association between investment and income. However, it should be noted that higher levels of investment do not necessarily lead to higher levels of income.

The present investigation endeavors to examine the extent of investment in cash and its contribution to employment and income. In the vicinity of the Balkhu area of Kathmandu Metropolitan City, there are numerous micro-enterprises that have been established. For the purpose of selecting a sample, all micro-enterprises registered in the ward office of Kathmandu Metropolitan City Ward no. 14 were initially classified into six clusters namely Kumari Club, Balkhuchowk, Kuleswor, Sita Petrol Pump, Kalanki, and Kalimati, each of which was assumed to comprise 30-50 micro-enterprises. Six clusters were ascertained utilizing the cluster sampling method. From these clusters, 30 enterprises were selected through random sampling method. In the random sampling method, lottery method was employed. In the study, universe was 112 micro-enterprises. To ensure the representation of the universe from the two randomly selected clusters, a sample of 30 micro-enterprises was chosen out of the total 112, as all clusters were formed based on the principle of homogeneity. Upon randomly selecting two clusters, a comprehensive list of all micro-enterprises was compiled for the purpose of analyzing each individual micro-enterprise included within each cluster. For the purpose of this investigation, a sample of 30 micro-enterprises with an investment of less than 200 thousand was selected. The primary focus was on the analysis of four key macroeconomic variables, namely investment, income, employment, and business type. A semi-structured questionnaire was employed as the basis for the primary data collection process in order to obtain data from each micro-enterprise.

#### Variable selection

In this study, four variables are simultaneously analyzed. As multiple regressions are used in the time of analyzing the data received from a primary source. In this paper, income is taken as a dependent variable while investments and number of employment are taken as dependent variables. This study fits a model by collecting all these explained variables. The variables income and investment are classified based on investment and income from the business. Low, medium, and high were used for the simplification to data analysis.

The investment was recoded and categorized as 50000 - 100000 = low investment, 100001 - 150000 = medium investment and 150000 and above was classified as high investment in this analysis. In accordance with Industrial Act 2011, micro-enterprises are categorized into low investment business. Income was recoded as

500000 - 1000000 =low income, 1000001 - 1500000 =medium income and 1500000 and above were classified as high income in the study.

# Model developed of the paper (specification of model)

For the actual explanation of the variables, a model was developed to explore the relationship between dependent and independent variables. The model was;

$$Y = {}_{0} + {}_{1}X_{1} + {}_{2}X_{2}.....(i)$$

Where,

Y= income from micro-enterprises

 $_0$ = intercept

<sub>1</sub>= coefficient of investment

 $X_1$ = investment in micro-enterprises

<sub>2</sub>=coefficient of the number of employment

 $X_2$ = number of employment

On the basis of the developed model, macro variables are analyzed and explore the role of independent variables on the dependent variable.

## **Results and Discussion**

The utilization of micro enterprises has become a widespread strategy for mitigating poverty levels in Nepal. The implementation of the Micro Enterprise Development Programme (MEDEP) was initiated in Nepal in 1998, with the financial backing of the United Nations Development Programme (UNDP). Subsequently, the Department of Cottage and Small Industry (DCSI) under the Ministry of Industry (MOI) launched a micro-enterprise development Programme in 10 districts since Fiscal Year 2067/68, with the objective of reducing poverty. Currently, the Programmes were jointly overseen by Micro-Enterprise Development Programme (MEDEP) and Department of Industry (DOI), and applied in approximately 60 districts throughout Nepal. However, this research work has revealed that the majority of these initiatives were established and sustained independently, with only a small fraction receiving financial assistance from local micro finance institutions.

A total of 13,243 novel micro entrepreneurs were generated, thereby mitigating their impoverished states, surpassing the planned objective of 18,270. Up until now, MEDEP (inclusive of Micro Entrepreneur Development for poverty alleviation (MEDPA) & Local Bodies) has initiated 119,085 microenterprises and has augmented

the initiation of over 187,358 employments for the rural destitute and socially omitted factions (http://www.np.undp.org). As such, it is performing commendably in the domain of poverty reduction.

# Relationship between investment and income in micro-enterprises

Investment and income are two important macro variables properly explained by well-known British Economist J. M. Keynes (Aganbegyan, 2022). In a normal sense, investment is a positive change in the stock of capital but in economics, it is more than that. It is the increase in the stock of capital which produces additional goods and services in an economy. Micro-enterprises. Investment can be classified into various categories. Investment in physical and human capital is the main type. In this research work, investment in physical capital is a major concern. Micro-enterprises are one aspect of such type of investment.

In this study, there is a positive relationship between investment and income in the context of micro-enterprises. Higher investment may not be necessarily leads to higher investment. Micro-enterprises have more employment opportunities so these are used to remove various economic problems.

If income increases, then consumption also increased due to an increase in the purchasing power of the consumers. Consumption increase is the symbol of an increase in effective demand, ultimately leading toward a higher level of employment in an economy. If demand increased for the commodities that are domestically produced, then there are dozens of positive effects on the economy and now the economy has a greater chance of a higher, broad-based, and sustainable growth rate.

 Table 1

 Relationship between investment and income

Investment			— Total		
		Low Medium I		High	— Total
Law	n	0	0	3	3
Low	%	0.00	0.00	100.00	100.00
Medium	n	0	4	8	12
	%	0.00	33.30	66.70	100.00
High	n	1	2	12	15
	%	6.70	13.30	80.00	100.00

Total	N	1	6	23	30		
Total	%	3.30	20.00	76.70	100.00		
Chi-square value(2)=3.39, degree of freedom( $df$ )=4, $p$ value=0.495							

Sources: Field Survey, 2022

From the Table 1, it is clear that there is a relationship (positive) between investment and income in micro-enterprises of Nepal but it is statistically insignificant. Since the p-value is more than 0.05 (p-value, 0.495> 0.05), there is no strong relationship between investment and income received from that investment.

Similarly, higher investment is not accompanied by a high level of income in the business. In the study area, out of 30 micro-enterprises, 3 invested low but they received a high level of income from their business. In most cases, higher investment is the source of higher income in micro-enterprises. A lot of economic and non-economic variables are combining working to determine the level of income from the investment of micro-enterprises in Nepal.

Even micro-enterprises are the sources of poverty alleviation and a good way of reducing the level of unemployment, there are differences in output in various areas of investment in Nepal. In this study, it was found that the investment in hair-cutting and meat shops seems to be more productive. Centrally located tea shops and sweet shops also have better return oriented when compared with Grocery Stores (*Kirana shops*) in Nepal. Employment condition is also different in these various investments. The condition of input and employment as well as output (basically known as the capital-output ratio) is taken as a key determinant of investment. The relationship between the type of business and the level of income can be explained based on two-way table formed with the help of SPSS 20 software.

 Table 2

 Relationship between type of business and level of income

Type of Business			Total		
		Low	Low Medium High		— 10tai
Tea shops	N	1	0	0	1
	%	100.0	0.0	0.0	100.0
Grocery	N	0	5	8	13

Shops	%	0.0	38.5	61.5	100.0
Hair	N	0	0	5	5
Cutting	%	0.0	0.0	100.0	100.0
Meat	N	0	0	7	7
Shops	%	0.0	0.0	100.0	100.0
Doutions	N	0	1	0	1
Boutique	%	0.0	100.0	0.0	100.0
Sweet	N	0	0	2	2
Shops	%	0.0	0.0	100.0	100.0
Vegetable	N	0	0	1	1
Shops	%	0.0	0.0	100.0	100.0
Total	N	1	6	23	30
Total	%	3.3	20.0	76.7	100.0
G1		1 ( 2) (6		0.0 1 (10) 10	1 0 000

Chi-square value(2)=40.60, degree of freedom(df)=12, p value=0.000

Sources: Field Survey, 2022

In the Table 2, it is clear that type of business is statistically significant with the level of income. Since the p-value is less than 0.05 and 0.01 (p-value is 0.000), the type of business is totally associated with the level of income. Low investment and high income is the key feature of micro-enterprises in the study area. The hypothesis of hair cutting and meat shops are the most lucrative areas of investment seem to be true since it is statistically significant.

Similarly, increasing investment has contributed to several employment opportunities in the study area. In observation, it was realized that less investment and a higher level of employment is possible in hair cutting, meat shops and in some Grocery shops. According to the owner of micro-enterprises, the return on the investment basically does not depend on the type of business but mostly determines the presence of similar business units in the vicinity. If there are a lot of the same types of business units, then the return from the business will be low even if it is lucrative in normal conditions. For example, if there is 4/5 hair-cutting business in a small area then the return and number of employment opportunities are definitely low.

Normally, the investment of Rs. 100000 is accompanied by approximately one and a half levels of labor hours with about double output (Rs 200000) in the micro-

enterprises. The relationship between business type and the number of employment involved there is presented as:

**Table 3** *Association between business type and number of employment* 

Business Type			- Total				
		1.0	1.5	2.0	3.0	4.0	- 10tai
T1	N	0	0	1	0	0	1
Tea shops	%	0.0	0.0	100.0	0.0	0.0	100.0
Grocery	N	11	1	1	0	0	13
shops	%	84.6	7.7	7.7	0.0	0.0	100.0
Hair	N	1	0	1	1	2	5
Cutting	%	20.0	0.0	20.0	20.0	40.0	100.0
Most Chans	N	1	1	5	0	0	7
Meat Shops	%	14.3	14.3	71.4	0.0	0.0	100.0
Doutique	N	1	0	0	0	0	1
Boutique	%	100.0	0.0	0.0	0.0	0.0	100.0
Sweets	N	0	0	2	0	0	2
Sweets	%	0.0	0.0	100.0	0.0	0.0	100.0
Vagatabla	N	0	0	1	0	0	1
Vegetable	%	0.0	0.0	100.0	0.0	0.0	100.0
Total	N	14	2	11	1	2	30
Total	%	46.7	6.7	36.7	3.3	6.7	100.0

Chi-square value(2)=35.25, degree of freedom(df)=24, p value=0.061

Sources: Field Survey, 2022 and based on data (processed through SPSS 20)

It is clear from the Table 3 that four people are getting employment in micro enterprises. In hair cutting business, 4 people are working only investing approximately Rs 50000. So that this business unit is most profitable when compared with other business types in the study area. Employment of 3 people is also possible in the same business so that again it proved the same i.e. it is a most profitable area of investment. According to the barber, it may be an attractive field of investment in the sense that there is a limited supply of such type of business unit. Just single employment is thereby investing approximately Rs 110000 in small businesses so that it is the least capital-output ratio. It is suggested from the side of such business investors that it is the least

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attractive field of investment because there are a lot of such business units in the study area.

Statistically, the relationship between the type of business and the number of employment is insignificant. Since the value of p is greater than 0.05, they are statistically insignificant. But in real life, it is significant because the main attractive fields of investment are hair cutting and meat shops. In this study, it is clear that the output of investment depends on the presence of such business units in their vicinity.

The relationship between income (dependent variable), investment, and the number of employment (independent variables) can be presented based on primary data collected from the study area.

 Table 4

 Relationship between income, investment and employment in micro-enterprises

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	1504947.	220506.8	6.824946	0.0000
Investment	0.926080	1.121058	0.826077	0.4160
Employment	56619.12	73154.65	0.773965	0.4457
R-squared	0.042182	Mean de	ependent var	1735067.
Adjusted R-squared	-0.028767	S.D. dep	endent var	310945.4
S.E. of regression	315386.2	Akaike	info criterion	28.25562
Sum squared residual	2.69E+12	Schwarz	criterion	28.39574
Log likelihood	-420.8343	Hannan	-Quinn criterion.	28.30045
F-statistic	0.594541	Durbin-	Watson stat	0.873871
Prob(F-statistic)	0.558880			

Sources: Field Survey, 2022 and based on data (processed through EViews 9)

From this analysis, the relationship among above illustrated variables can be presented in an equation as;

$$Y = 1504947 + 0.926X_1 + 56619.12X_2...$$
 (ii)

After the analysis, we can say that relationship between income and investment is statistically insignificant (p-value 0.416 > 0.05) and the same happens between income and number of employment (p-value 0.445 > 0.05). But in the above analysis, there is a close relationship between type of business and number of employment (p-value 0.000 < 0.01).

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Similarly, the coefficient of determination value in the table,  $R^2$ = 0.04, serves as a statistical indicator of weak association among income, investment, and number of employment. The Durbin-Watson statistic is a valuable tool for detecting autocorrelation in residuals resulting from statistical regression analysis. This statistic ranges from 0 to 4, with a value of 2 indicating no autocorrelation in the collected samples. Moreover, a value approaching 0 indicates positive autocorrelation, while a value approaching 4 indicates negative autocorrelation within the collected sample. In our analysis, the Durbin-Watson value of 0.87 symbolizes positive autocorrelation within the collected data.

#### Conclusion

Micro-enterprises have made significant contributions to the economy in terms of income generation and employment creation. The findings of the study indicate that these micro-enterprises have made a positive contribution to various macro variables. Statistically, there exists no significant correlation between the nature of enterprise and its workforce size. The p-value being greater than 0.05 confirms their statistical insignificance. However, in practicality, it holds great significance as hair salons and butcher shops remain the most lucrative investment domains. This research demonstrates that the return on investment is contingent on the existence of these business units in close proximity.

The statistical analysis reveals that the relationship between income and investment, as well as the relationship between income and number of employment, are deemed statistically insignificant with p-values of 0.416 and 0.445 respectively, both of which exceed the threshold of 0.05. However, it is important to note that the type of business and number of employment have a close relationship with each other, as indicated by the p-value of 0.000, which is less than 0.01. Furthermore, the value of Durwin-Watson, which is equal to 0.87, signifies a positive autocorrelation in the collected data.

# Implication and Limitation of the Study

The study has highlighted the policy relevance of micro-enterprises in Nepal, emphasizes the importance of considering the practical significance of relationships beyond statistical significance, and underscores the need for context-specific approaches to support microenterprises in contributing to the local economy. Furthermore, the study has limited on a specific area (Kathmandu Metropolitan-14) and a limited number of microenterprise

types, which may not fully capture the diversity and nuances of microenterprises across Nepal.

#### **Author Contributions**

Conceptualization: RBB and BBK; methodology: RBB, KRA and BBK; data analysis: RBB; writing—original draft preparation: BBK; writing—review and editing, RBB, and KRA. All authors have read and agreed to the published version of the manuscript.

## **Funding**

This research received no external funding.

### **Informed Consent Statement**

Informed consent was obtained from all subjects involved in the study.

## **Data Availability Statement**

Data available upon request from the corresponding author.

#### **Conflicts of Interest**

The authors declare no conflict of interest.

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