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Article

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Research in Globalization

Provided in Cooperation with:

Elsevier

Suggested Citation: Behera, Jayanti; Sahoo, Dukhabandhu (2025) : Gender perspectives of globalization and human development: Evidence from individual-level data, Research in Globalization, ISSN 2590-051X, Elsevier, Amsterdam, Vol. 10, pp. 1-17, <https://doi.org/10.1016/j.resglo.2025.100282>

This Version is available at:

<https://hdl.handle.net/10419/331204>

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Gender perspectives of globalization and human development: Evidence from individual-level data[☆]

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ARTICLE INFO

JEL classification:

F6
O15
J16
D14
C25

Keywords:

Globalization
Human development
Gender
Global development
Beta regression
India

ABSTRACT

Global development debate, which challenges the traditional North-South divide and focuses on the within-country or micro-level development perspective, argues that there is gender inequality in development within countries or at the micro level. It has brought a new dimension to the argument on development issues by addressing the gender perspective of globalization. Globalization plays a vital role in contributing to greater gender equality in human development. In view of this, this study explores the gender dynamics of globalization and human development at the individual level by covering geo-socioeconomic factors in Odisha, India. It uses primary data collected through a structured survey schedule from 579 individuals in Odisha. By using the beta regression model, the study found that both sociocultural and environmental globalization improve human development at the individual level. Further, as regards the gender perspective, the effect of environmental globalization on human development is stronger for females than males. However, the effect of psychological globalization on human development is weaker for females than for males. Females have lower levels of human development than males, while adults and middle-aged individuals have higher levels of human development than elderly individuals. Moreover, individuals from other backward classes, scheduled classes, and scheduled tribes have lower levels of human development than individuals from unreserved categories. Individuals from Muslim and Christian communities have higher levels of human development than those from Hindu communities. Individuals from joint families experience higher levels of human development than those from nuclear families. Additionally, urban residents have higher levels of human development than rural ones, while individuals from tribal regions have lower levels of it than those from nontribal ones. In order to promote gender equality, globalization can be used as a tool for female human development, having special provisions for female members of the state.

1. Introduction

According to the Global Gender Gap Report (World Economic Forum [WEF], 2023), there is a gap of 31.6 % between women and men in terms of education, health, employment, and political leadership. Gender inequality is one of the biggest obstacles to human development (Batha, 2018). Sen (1985) argues that gender inequality severely restricts women's capabilities, such as education, health, and economic participation, which hinders them from achieving equitable and sustainable development. The extent of gender discrimination is also seen in Sen (1992)'s work, documenting the phenomenon of "missing women" in many societies. Gender discrimination is more prevalent

among individuals in developing countries than in developed countries (Iqbal et al., 2022). Although the enormous evolution of globalization, technology, and communication is able to bridge the gender gap in education, health, income, and overall human development at the macro level, at the micro or individual level, the effect is still unrecognized or yet to be explored. This calls for more context-specific approaches focusing on the role of globalization in inclusive development and gender equity. In fact, the global development debate, which challenges the traditional North-South divide and emphasizes the local or micro-level development perspective, encourages a context-specific analysis of how global forces influence gender equality in human development (Horner and Hulme, 2019; Horner, 2020).

[☆] This article is part of a special issue entitled: 'Global Development' published in Research in Globalization.

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<https://doi.org/10.1016/j.resglo.2025.100282>

Received 23 September 2024; Received in revised form 25 March 2025; Accepted 28 March 2025

Available online 15 April 2025

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Globalization plays a crucial role in contributing to greater gender equality in human development and its three dimensions (education, health, and income) at the individual level through exposure to foreign cultures, exchanging ideas, knowledge, educational and health-related resources, technological innovations, and access to global markets (World Bank, 2011). Globalization through multinational corporations (MNCs) brings more jobs for women, provides better working conditions and higher wages than domestic industries, and spreads norms and values that favour gender equality (Lee and Shin, 2020). It can also be seen in the literature that countries with higher levels of globalization exhibit greater gender equality in human development (Sabi, 2007; Sapkota, 2011). On the other hand, globalization affects different sections of society in distinct ways. As evidenced by Roll, Semyonov, and Mandel (2022), women are still lagging behind men in their attainment of higher wages and higher-status jobs in this globalized era. In a similar vein, it is discussed in the literature that globalization dominates women by restricting them to household work, care, and cultural tradition and neglects their education, health, and employment in third-world countries like India (Mohanty, 1984; 1991; 2003). Mohanty (2003) also emphasizes the conflicts between local political dynamics and global economic integration, including how imperialist and capitalist ideologies influence women's lives differently in different regions. Likewise, Lazar (2017) argues that, though globalization spreads certain ideas about progress and development, it also spreads stereotypes and gendered norms across borders. Her framework encourages linking micro-level language use with these broader global forces, revealing how globalization supports patriarchal structures while also offering opportunities for transnational feminist critique and solidarity. Additionally, the study by Ganguly-Scrase (2003) argues that globalization has both positive and negative effects on women in India. However, over the past decade, the intensification of the globalization of the Indian economy has dramatically influenced the social life of the country both economically and culturally (Ganguly-Scrase, 2003). It has brought a new dimension to the argument of the gender perspective of globalization. Thus, there is a need to reinvestigate the effect of globalization on the development of individuals, which will also address the gender aspect in a growing economy like India.

India, one of the fastest-growing developing countries in the world, has a gender gap of 35.7 % (more than the global gender gap of 31.6 % in 2023) in education, health, employment, and political leadership (WEF, 2023). The female human development index (HDI) is 0.57, and the male HDI is 0.67 in India (United Nations Development Programme [UNDP], 2021). Further, the country's gross national income per capita purchasing power parity (PPP) is \$2,277 for females and \$10,633 for males, and the mean years of schooling is 6.3 years for females and 7.2 years for males (UNDP, 2021). This disparity is higher across regions of India and is further fueled by globalization as regions are capable of adjusting to globalization to achieve better development. Odisha,¹ one of the eastern states of India, is rich in natural resources and has a total population of 41,974,218, with 21,212,136 males and 20,762,082 females, according to the 2011 census. Out of the total population of Odisha, 16.69 % of the population lived in urban areas while 83.31 % in rural areas. The state accounts for 3.47 % of the population of India and has a sex ratio of 979 females per 1000 males, which is above the national average of 943 as per the 2011 Census. Further, both Scheduled Tribes (ST) and Scheduled Castes (SC) constitute 39.98 % of the total population (with ST accounting for 22.85 % and SC for 17.13 %) as per the 2011 census, while Other Backward Classes (OBC) constitutes 39.31 % of total population according to a survey by the Odisha State Commission for Backward Classes. However, Odisha has performed poorly in

its goal for development (it was ranked 22 out of 23 states and union territories in the national HDI and 32 out of 35 states and union territories in the national gender development index [GDI], respectively, in 2011). Without addressing this issue, it will be really difficult for Odisha to achieve the Sustainable Development Goals (Goal 5: gender equality) by 2030 (Conceição et al., 2023). However, it is expected that globalization, through its positive effect at the individual level, can usher in gender equality in the state. However, at this juncture, it is pertinent to study the gender dynamics of globalization at the micro (individual) level in a state like Odisha. To date, hardly any studies have explored the gender and geo-socioeconomic dynamics of globalization and human development at the individual level in Odisha, India. Therefore, the objective of this study is to do precisely that. The present study has also answered the relevant research questions, i.e., (1) Does globalization improve gender equality in human development at the individual level in Odisha, India? and (2) What are the implications of gender dynamics for global development policies? Additionally, the present study contributes to the existing literature as well as to the global development debate by examining the impact of globalization on gender inequality in human development at the individual level, and it uncovers the geo-socioeconomic dynamics of globalization. It also provides critical insights for framing equitable and inclusive development policies.

The rest of this paper is structured as follows. Section 2 presents a brief literature review on globalization and human development from macro to micro levels and develops a conceptual framework on the basis of that literature review. Section 3 deals with the data sources and methods used for the analysis. Section 4 presents and discusses the results. Lastly, Section 5 concludes with some policy suggestions.

2. Related literature

Human development is defined as the process of widening people's choices and opportunities, which are essential for them to maintain a long and healthy life, gain knowledge, and attain a decent standard of living at all levels of development. It is about the real freedom that ordinary people have to decide who to be, what to do, and how to live (UNDP, 1990; Sen, 1989). Gender equality in human development means that both males and females are equal in terms of socioeconomic opportunities (Iqbal et al., 2022). Sen (1989) argues that development should focus on achieving true gender equality by giving women agency and freedom to make decisions about their lives, including participation in the economy and political sphere. However, the repercussions of not taking women into the mainstream are discussed by Mahbub-ul-Haq, stating that "Development, if not engendered, is endangered." Thus, the global development argument should be assessed based on gender equality in human development by considering the potential effect of globalization.

There are a considerable number of studies on globalization and gender equality in human development at the macro level (Seguino, 2006; Sabi, 2007; Sapkota, 2011). A large number of studies have been undertaken on globalization and gender equality in the dimensions of human development covering different countries and regions (Seguino, 2006; Dejardin, 2009; World Bank, 2011; Asongu et al., 2020; Roll et al., 2022). By using individual data from 47 countries, Roll et al. (2022) found that globalization improves women's participation in the labour force. The economic aspects of globalization in the form of trade, foreign direct investment (FDI), and information and communication technology (ICT) also affect gender equality in income or employment, education, and health (Berik et al., 2002; Chen, 2004; Schultz, 2006; Efobi, Tanankem, and Asongu, 2018; Ouedraogo and Marlet, 2018; Stolzenburg et al., 2020). Ouedraogo and Marlet (2018) found that FDI inflows improved women's welfare and reduced gender inequality in 94 developing countries during the period 1990–2015. However, a study by Helble and Takeda (2020) found no evidence of gender equality in wages in the presence of FDI inflow at the household level in Cambodia. Another study, this time by Yu, Zhang, and Wen (2019), also found that

¹ In 2011, the Government of India approved the name change of the State of Orissa to Odisha. This document reflects this change. However, when reference is made to policies that predate the name change, the formal name Orissa is retained.

at the household level, FDI improves women's economic status by increasing female earnings. [Cameron, Kocum, and Berry \(2020\)](#) found that an individual with better economic security in terms of income and employment has a positive attitude toward globalization. A study by [Patel and Rietveld \(2022\)](#) observed that globalization has a positive impact on individuals' perceptions of entrepreneurship. In the Indian context, the literature has also discussed globalization and gender equality in human development and its three dimensions ([Arora, 2012; Deb and Sen, 2016; Ghosh, 2022](#)). By using household-level and industry-level data, [Sharma \(2020\)](#) found that foreign direct investment increases the employment of unskilled female workers in India. However, no studies have been undertaken on globalization and gender equality in human development at the individual level covering socioeconomic aspects.

2.1. Conceptual framework

Before discussing the conceptual framework, it is worth mentioning of global development debate, which sheds some new light on framing the relationship between globalization and gender equality in human development. Global development is a process of providing opportunities for exploring and addressing collective issues like gender, health, education, finance, class, climate change, and the shared challenges at the ground level ([Horner and Hulme, 2019](#)). It is defined by "converging divergence," i.e., by decreasing inequalities between countries and increasing inequalities within countries, providing a new perspective that gender inequalities should be addressed within countries or micro levels considering the global forces. [Horner and Hulme \(2019\)](#) argue that the traditional international development model is based on a one-way flow of aid from the developed "North" to the developing "South" and has become increasingly ineffective in the face of globalization. They claim that development is now a global process, formed by interconnected flows of technology, labour, and capital. As new economic powers emerge in previously aid-recipient regions, and global challenges such as climate change, urbanization, and inequality (gender) transcend borders, development policies must be rethought and include micro-level perspectives ([Horner and Hulme, 2019; Horner, 2020](#)).

At the individual level, globalization is defined as the degree to which the individual is connected with the rest of the world in terms of economic, social, cultural, psychological, and environmental dimensions. Similarly, at the individual level, human development is defined as the well-being of individuals in terms of access to healthcare facilities, education, and income. The present study has developed a conceptual framework to analyze the relationship between globalization and gender equality in human development at the individual level by taking ideas from the macro-level literature. Some of the mechanisms discussed in the conceptual framework are based on the macro-level conceptual framework because the logic for both macro and individual levels is the same. The macroeconomic literature has largely identified the three dimensions (namely economic, social, and political; [Dreher, 2006](#)) of globalization. It is worth mentioning that since globalization facilitates the spillover effect of technology and through its different dimensions affects the environment, technological development is assumed to be within globalization. However, at the micro/individual level in developing economies like India, one can identify economic, sociocultural, psychological, and environmental dimensions of globalization that can shape human development. At the individual level, these dimensions of globalization can have both positive and negative effects on gender equality in human development. Globalization facilitates new economic opportunities for female individuals through access to global markets and by providing entrepreneurial and employment opportunities. This can contribute to women's economic empowerment ([World Bank, 2011](#)) and ultimately promote gender equality in human development. It facilitates educational opportunities for females by giving them access to educational resources and improving communication channels from around the world.

Globalization also promotes the exchange of ideas, knowledge, and technologies, which can positively influence the educational and skills development of women and thus their human development ([Dejardin, 2009; Aroram, 2012](#)). Further, the economic empowerment of women, coupled with better education due to globalization, will provide access to gender-specific healthcare facilities, all of which make them better off psychologically, leading to their better participation in decision-making (policy, institutional, political, and environmental) processes. On the other hand, globalization widens income inequality between men and women. This is because women, especially in developing economies like India, are mostly engaged in informal sectors with lower wages, limited benefits, and reduced job security ([Roll et al., 2022](#)). This hinders women's economic empowerment and thereby their human development. Secondly, globalization dominates the traditional local cultural values and gender norms that affect health (by creating tension, stress, and overthinking) and thus the human development of women ([Fig. 1](#)).

3. Data sources and methods

3.1. Study Region

The present study has used primary data collected from individuals from Odisha through proper sampling techniques. Odisha, one of the eastern states of India, is rich in natural resources and cultural heritage. The state is located between 17.49°N and 22.34°N latitude and meridians of 81.27°E and 87.29°E longitude on the east coast of India ([Fig. 2](#)). It is bounded by the Bay of Bengal in the east, West Bengal in the northeast, Bihar in the north, Madhya Pradesh in the west, and Andhra Pradesh in the south. The state extends over an area of 155,707 square kilometers, accounting for about 4.87 % of the total area of India. As mentioned earlier, Odisha had a total population of 41,974,218 (3.47 % of the total population of India), comprising 21,212,136 males and 20,762,082 females as per the 2011 census. The state is divided into 30 administrative geographical units, called "districts."

3.2. Sampling Design

In this study, since the population size is unknown, the sample size was determined based on the [Cochran \(1963\)](#) formula.² According to the [Cochran \(1963\)](#) formula, a sample of 385 or more is appropriate for a precision level of 5 %. This formula is also considered appropriate for

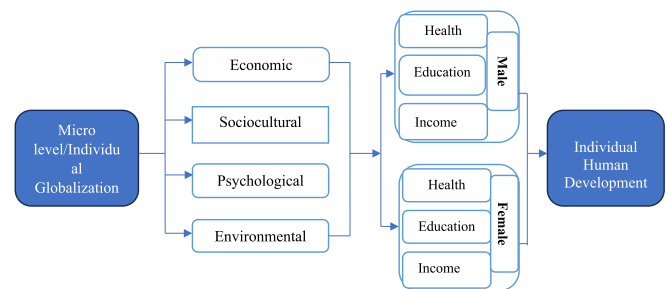


Fig. 1. Conceptual Framework on Globalization and Gender Equality and/or Equity in Human Development at Individual Level. .

Source: Authors' construction

² The Cochran (1963) formula is $n = \frac{Z^2 \times p \times q}{e^2}$. The study takes $Z = 1.96$ (at the 95% confidence level), $p = 50\% = 0.5$, $q = (1 - p) = 0.5$, and $e = 5\% = 0.05$ to determine the sample size.

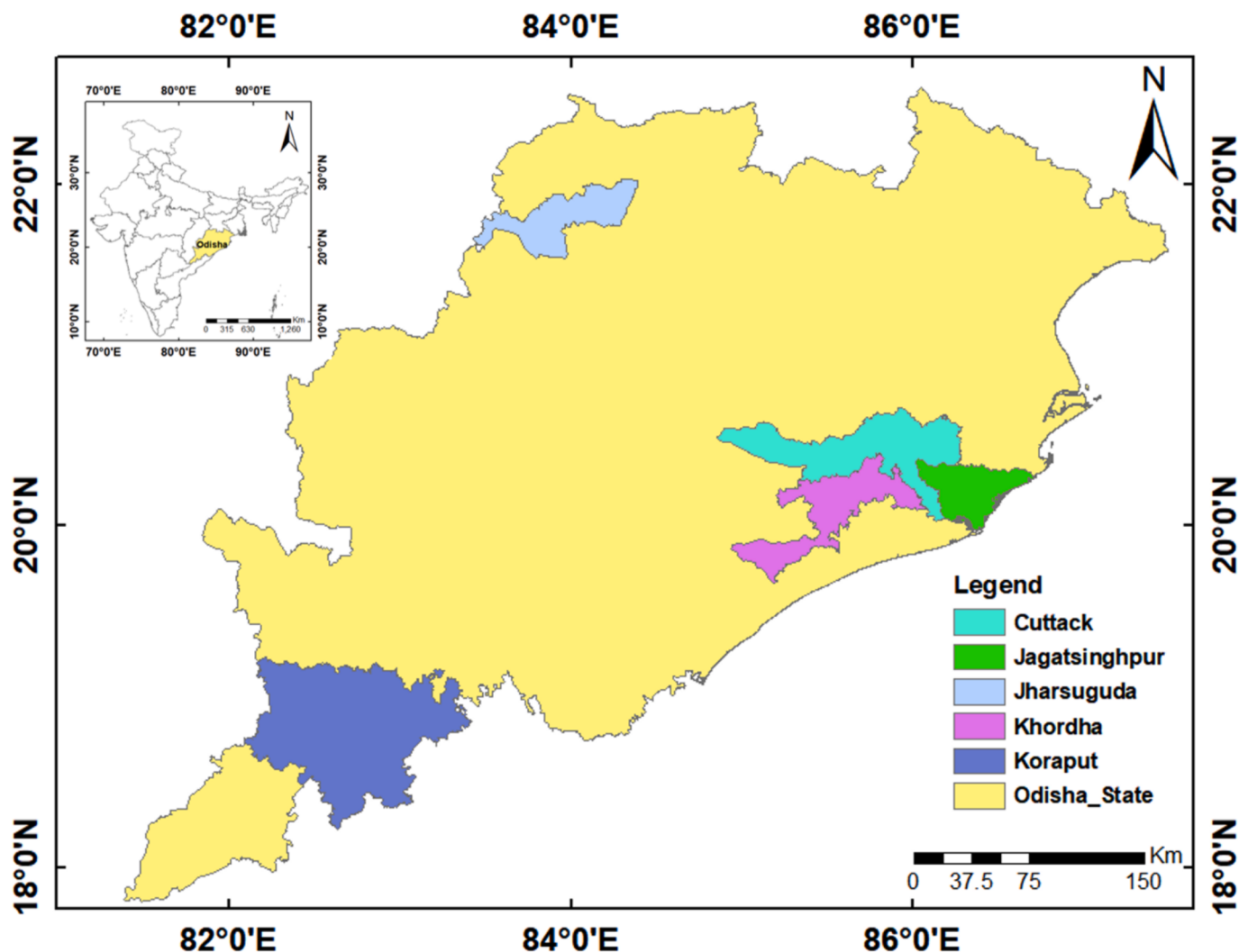


Fig. 2. Study Area. .

Source: Authors' construction using ArcGIS software.

calculating the sample size in the case of a large population in the literature (Israel, 1992).³ For the present study, the size of the sample is 579, and the selection of the individuals was done through a multistage sampling procedure. The data for these individuals were collected by canvassing a structured survey schedule from April to September 2022. The details of the sampling process are presented in Table 1. The survey schedule was prepared after a careful review of the literature and repeated rounds of iteration through the pilot survey.

The study was carried out in four districts of Odisha, namely Khordha, Jagatsinghpur, Koraput, and Jharsuguda, and one urban body, namely Cuttack, based on geo-socioeconomic characteristics (Fig. 2). The selection of the sample was made through a multistage sampling technique. In the second stage, Odisha was divided between urban and rural areas based on the extent of urban and rural populations (16.7 % in urban areas and 83.31 % in rural areas as per the 2011 census). The sample was divided into urban and rural areas to reflect the fact that the dynamics of human development and globalization are different in urban and rural areas because of their respective characteristics. Urban areas of Odisha include metropolitan cities. The metropolitan cities of

India are classified into three categories, i.e., X (Tier-I),⁴ Y (Tier-II),⁵ and Z (Tier-III),⁶ by the government of India based on the population density of the city. According to the 2011 census, three of the cities of Odisha come under the Tier-II category, i.e., Bhubaneswar, Cuttack, and Rourkela. Out of these three cities, one (Cuttack Municipal Corporation) was selected through the simple random sampling (SRS) technique, i.e., Cuttack. Cuttack Municipal Corporation has 54 wards according to the 2011 census. Out of these 54 wards, one was selected through the SRS technique.

In order to collect data from rural Odisha, four districts were selected based on its geo-socioeconomic characteristics. The districts of Odisha are classified into “developed” and “underdeveloped” districts based on

⁴ Tier-I cities consist of the top metropolitan cities of India and have a high population density and higher living expenses. They have major international airports, top multispecialty hospitals, industries, education, and research institutes.

⁵ Tier-II cities cover the developing cities with a speedy growth rate in industrial and allied sectors. These cities are convenient destinations for foreigners to get the best services at reasonable costs. They also have distinct urban compared to rural characteristics.

⁶ Tier-III cities include those cities that have a lower population density and cost of living, and have poor air connectivity and other infrastructure facilities (Farzin, 2019).

³ Generally, it is assumed in the literature that if the population is unknown, 50% of the sample proportion is taken for maximum variability in the population (Israel, 1992).

Table 1
Sampling Process of the Study

1st Stage	2nd Stage	3rd Stage	4th Stage	5th Stage	6th Stage	7th Stage
State	Urban/Rural	Urban Center/ District	Division/Block	Urban/ Rural Area	Ward(s)	Individuals
Odisha, India	Urban units (3) Bhubaneswar, Cuttack, Rourkela Rural areas, 30 districts	One Urban center (Cuttack)	One Urban center (Cuttack)	One Urban center	One ward	83 individuals
		Four districts (Khordha, Jagatsinghpur, Koraput, Jharsuguda)	One block each from four districts (total 4 blocks: Jatni, Kujang, Semiliguda, Jharsuguda)	One Gram Panchayat (GP) from each block (total 4 GP: Haripur, Kothi, Dudhari, Badmal)	Two wards from Haripur GP, two wards from Kothi GP, three wards from Dudhari GP, and one ward from Badmal GP; total eight wards	Khordha – 188, Jagatsingpur – 100, Koraput – 108, Jharsuguda – 100; total 496 individuals
Purposive Sampling	Stratified Sampling	Stratified Sampling	Simple Random Sampling	Simple Random Sampling	Simple Random Sampling	Proportional cum Sequential sampling

Source: Authors' construction.

the HDI score given by the Human Development Report of Odisha in 2004.⁷ The developed districts are Khordha, Jharsuguda, Cuttack,⁸ Sundargarh, Deogarh, Angul, Puri, Bhadrak, Mayurbhanj, Kendrapara, Kalahandi, Dhenkanal, Sambalpur, Nuapada, and Nayagarh. The underdeveloped districts are Sonepur, Bargarh, Balasore, Jagatsinghpur, Ganjam, Balangir, Jajpur, Boudh, Keonjhar, Rayagada, Nabarangapur, Koraput, Gajapati, Kandhamal, and Malkangiri. From the developed districts, Khordha and Jharsuguda, and from the underdeveloped districts, Jagatsinghpur and Koraput, were selected through the SRS technique. Further, some of the districts in Odisha are relatively more industrialized than others. There are 12 industrial districts in Odisha, namely Sundargarh, Koraput, Dhenkanal, Jajpur, Keonjhar, Angul, Jharsuguda, Sambalpur, Bargarh, Bolangir, Mayurbhanj, and Rayagada (Planning and Convergence Department, 2019). Since one of the industrialized districts, i.e., Jharsuguda, had already been selected in the developed districts category, one more district, i.e., Koraput, was selected through the SRS technique from among the 12 industrial districts to have a better representation of industrial districts. Now, in the sample districts, there are two industrialized districts.

Additionally, Odisha has a 480-kilometer-long coastline. According to the Centre for Coastal Zone Management and Coastal Shelter Belt (2017), the state has six coastal districts, namely Balasore, Bhadrak, Kendrapara, Jagatsinghpur, Puri, and Ganjam. Out of these six coastal districts, one district, namely Jagatsinghpur, had already been selected under the underdeveloped district category. According to the Census (2011), there are 13 tribal districts in Odisha, namely Mayurbhanj, Sundargarh, Koraput, Rayagada, Nabrangpur, Malkangiri, Kandhamal, Gajapati, Sambalpur, Keonjhar, Kalahandi, Balasore, and Ganjam. However, the tribal population in the state of Odisha constitutes 22.5 %, therefore, only one district, namely Koraput, was chosen through the SRS technique to represent the tribal districts of Odisha. After the selection of sample districts, one block was selected from each district through the SRS technique. From each block, one gram panchayat was chosen through the SRS technique. Likewise, villages were chosen from corresponding gram panchayats. After the selection of villages, wards were selected through the SRS technique. From each ward, a list of voters was collected (voters are aged 18 and above in Odisha). Then, from the voter list, a sequential sampling technique was used to select the proportional number of individuals.

3.3. Method

In addition to the proper presentation and visualization of data, the study has calculated the globalization index and its various components

(economic, sociocultural, psychological, and environmental) and related them to human development for both males and females at the individual level by using the tetrachoric principal component analysis (PCA) method and regression technique, respectively. Pre-diagnostic tests, including the heteroskedasticity test, multicollinearity test, endogeneity test, and normality test of all the variables, were carried out before analyzing the data. However, since the indices used for the study are in fractions (values lying between 0 and 1), in order to analyze the association among these indices, econometrics techniques such as beta regression and fractional regression (Papke and Wooldridge, 1996) were used. The advantage of this method is that it addresses the problem of asymmetries and heteroskedasticity. Following Carrasco, Ferrari, and Arellano-Valle (2014), the beta regression model for the present study was specified as:

$$IHDI = (IV)\beta + u, \quad (1)$$

where, $E(IHDI) = \text{Beta}((IV)\hat{\beta}, \sigma_u^2)$, $IV \sim N\{(IV)\hat{\beta}, \sigma_{IV}^2\}$, and $u \sim N\{0, \sigma_u^2\}$,

“IHDI” is the “individual human development index”, “IV” is the vector of explanatory variables that include “individual globalization index” and other demographic, socioeconomic, psychological, cultural, environmental, and dummy (for geo-social and economic regions like rural–urban, industrial–nonindustrial, coastal–noncoastal, tribal–nontribal) variables. The Individual Human Development Index (IHDI) is computed by taking the arithmetic mean⁹ of the three normalized indices, i.e., health index (total health expenditure of the individual in the last year), education index (number of years of education of the individual), and income index (monthly income of the individual). Hence, the IHDI is defined as:

$$IHDI = \left(\frac{HI + EI + II}{3} \right), \quad (2)$$

where HI = Health Index, EI = Education Index, and II = Income Index. The value of the IHDI will lie between 0 and 1, i.e., $(0 \leq IHDI \leq 1)$. In order to calculate the dimension indices of education and income, minimum and maximum values/goalposts are chosen. Having defined the minimum and maximum values, the dimension indices are calculated as:

$$\text{Dimension Indices} = \left(\frac{\text{Actual Value} - \text{Minimum Value}}{\text{Maximum Value} - \text{Minimum Value}} \right) \quad (3)$$

Since the health indicator, i.e., total health expenditure in the last year, is in reverse form, to make the health index unidirectional, the study has taken the difference between the maximum and the actual values in the numerator, keeping the denominator as it is.

⁷ The Human Development Report of 2004 was chosen because since 2004 no authenticated source has calculated the HDI in Odisha.

⁸ Cuttack is called a “geographical unit/district” or a “city.”

⁹ The present study uses the arithmetic mean to compute the IHDI, not the geometric mean, because some of the dimensions have values of zero.

Similarly, the Individual Overall Globalization Index (IOGI) is constructed by using tetrachoric PCA of four-dimension indices, i.e., individual economic globalization index (IECOGI), individual sociocultural globalization index (ISCGI), individual psychological globalization index (IPGI), and individual environmental globalization index (IENVGI). The selection of the dimensions of globalization is made based on the literature and field survey. At the macro level literature, globalization has three dimensions, namely economic, social, and political (Dreher, 2006). However, at the micro level, though one can measure economic and social globalization, it is difficult to measure political globalization. In fact, during the field survey, economic, social, psychological, and environmental dimensions of globalization were observed, while the political dimension was not evident. Thus, these four dimensions of globalization were selected. The individual overall globalization index is then standardized by using the following formula:

$$IOGI = \left(\frac{\text{Actual Value} - \text{Minimum Value}}{\text{Maximum Value} - \text{Minimum Value}} \right) \quad (4)$$

The IOGI value will lie between 0 and 1, i.e., $(0 \leq (IOGI) \leq 1)$.

Initially, the indicators of each dimension index of overall global-

$$\begin{aligned} IECOGI = & ((\text{Remittances} + \text{Work in MNCs} + \text{Work in DHL}^1 \\ & + \text{Work in FedEx}^2 + \text{Work in UPS}^3 + \text{Possessing credit cards} \\ & + \text{Access to internet banking} + \text{Possessing digital payment apps} \\ & + \text{Trading in stock market} + \text{Reserve foreign currencies} \\ & + \text{Deposit in foreign bank} + \text{Invest in foreign country}) / 12) \end{aligned} \quad (5)$$

The Individual Socio-Cultural Globalization Index (ISCGI) is constructed along similar lines to the IECOGI. However, since the total number of indicators under individual sociocultural globalization is 62, the indicators are categorized into seven groups for better representation. The details of the 62 indicators are presented in Table A.2 in the Appendix. The ratio is presented in equation 6 as (¹DHL: Dalsey, Hillblom, and Lunnis is the world's leading logistics company, ²FedEx: Federal Express Corporation, ³UPS: United Parcel Service, an American multinational company, is the world's largest courier company.)

$$\begin{aligned} ISCG = & ((\text{Deliberate use and consumption of foreign products} + \text{Presence of foreign companies where the individual lives} \\ & + \text{Presence of foreign restaurants and supermarkets where the individual lives} \\ & + \text{Availability of products or services produced by MNCs in the area where the individual lives} \\ & + \text{Participation in global communication flows and mass communication} + \text{Knowledge of international lingua franca (mainly English)} \\ & + \text{Global or supranational mobility}) / 7) \end{aligned} \quad (6)$$

ization were in the ordered form (i.e., on a Likert scale of 1 to 5). To make the estimation process smooth, these indicators are converted into binary form (0 and 1). For example, if the Likert scale value is 3 or less, it is converted to 1, and for Likert scale values of 4 and 5, the value is assigned 0.

The Individual Psychological Globalization Index (IPGI) is computed like the IECOGI by taking the ratio of the six indicators, and the ratio is presented in equation 7 as follows:

$$\begin{aligned} IPGI = & ((\text{Observed any changes in the dressing style over the period of time} + \text{Influenced by the Western dressing style} \\ & + \text{Cally your father and mother in the name of Daddy and Mommy} + \text{Preference for foreign - originated foods} \\ & + \text{Prefert to celebrate birthday by cutting the cake} + \text{Feel that people are isolating themselves day by day}) / 6) \end{aligned} \quad (7)$$

The Individual Economic Globalization Index (IECOGI) is constructed as a ratio. The numerator of the ratio is the sum of the presence of the indicators (i.e., the value is 1 if the indicator is present and 0 otherwise), and the denominator of the ratio is 12. The ratio is presented in equation 5 as follows:

Likewise, the Individual Environmental Globalization (IENVGI) Index is constructed like the IECOGI as the ratio of five (05) indicators and shown in equation 8. Since the total indicators under environmental globalization is 5, the denominator of the index is 5. The ratio is presented as follows:

$$\begin{aligned} IENVGI = & ((\text{Concerned about Global warming} + \text{Concerned about Climate Change} \\ & + \text{Concerned about dangerous diseases, e.g., COVID - 19, HIV, SARS, bird flu} \\ & + \text{Concerned about protection of the natural environment [afforestation and waste disposal {not spreading plastic}] } \\ & + \text{Watching the Discovery Channel, National Geography, and Animal Planet channels}) / 5) \end{aligned} \quad (8)$$

The value of each dimension index will lie between 0 and 1. A detailed list of indicators used for the construction of dimension indices of globalization is presented in Table A.1 in the Appendix. Additionally, the detailed descriptions and the nature of dependent, independent, and control variables are presented in Table A.2 in the Appendix. Further, the steps or procedures taken for data cleaning are mentioned in detail in Table A.3 in the Appendix. The selection of control variables like age group, gender, marital status, caste, religion, and family type is made based on the literature (Imran, Cheok, and Devadason, 2018; Bridge, 2017; Chalam, 2007; Tikhute, 2023; Dhanaraj and Mahambare, 2019). Further, the marginal effect of the independent variables is interpreted and compared. Additionally, the slope dummy of gender and dimensions of globalization are created to understand the gender dynamics of globalization and human development. Estimation is done through the statistical software STATA 18.0 edition (StataCorp, 2023; Bruin, 2006). The method used in the study furthers the global development debate by moving beyond the theoretical discussions to an empirical discussion of how the dimensions of globalization contribute to gender equality in human development by using individual-level data.

4. Results and discussions

The descriptive statistics and correlation analysis of all the variables are presented in Table 2 and Table A.4 in the Appendix. Table 2 shows that the mean value of the IHDI is 0.490. The mean value of the IECOGI is low (i.e., 0.062), while the mean value of the IENVGI is high (i.e., 0.694) followed by the IPGI (0.572). The mean age is 41 years, which indicates that most of the individuals belong to the middle-aged category. Table A.4, presented in the Appendix, reveals that economic, sociocultural, psychological, and environmental globalization are positively correlated with human development. Additionally, the cross-tabulation of individual overall globalization and its four dimensions along with other control variables is shown in Table A.5 in the Appendix (which is divided into five sub-tables, A.5.1–A.5.5). The level of overall globalization and its four dimensions are categorized into three parts, namely low (≤ 0.25), moderate (0.26–0.75), and high (> 0.76) levels of globalization.

Table A.5.1 presented in the Appendix reveals that individuals in the study area have a moderate (0.25–0.75) level of overall globalization, which is equally distributed between females (79.5 %) and males (79.3 %). This implies gender equality in experiencing a moderate level of overall globalization. Further, the moderate level of overall globalization is higher for individuals in the 54-and-above age group (91.6 %), widowed individuals (86.7 %), the ST category (93.3 %), and Christian

communities (98.7 %). A higher percentage of individuals from nuclear families (84.6 %) are exposed to a moderate level of overall globalization compared to those from joint families (71.8 %). Moreover, the moderate level of globalization is higher for individuals residing in urban (85.5 %), coastal (86 %), nonindustrial (91 %), and tribal (97.2 %) regions than for those living in rural (78.4 %), noncoastal (78.1 %), industrial (24 %), and nontribal (75.4 %) regions.

With respect to the dimensions of globalization, individuals in the study area have a low level of economic globalization (Table A.5.2 in the Appendix). By comparing with the geo-sociodemographic characteristics, it is found that the low level of economic globalization is evenly distributed between females (86.6 %) and males (86.4 %). However, the low level of economic globalization is more pronounced among the elderly (95 %), widowed (100 %), ST (94.8 %), and Christian communities (100 %). Further, it is more prevalent in nuclear families (93 %) than in joint families (76.9 %). The low level of economic globalization is higher for individuals residing in urban (100 %), coastal (100 %), and nonindustrial (99.6 %) regions than for those living in rural (84.3 %), noncoastal (83.7 %), and industrial (24 %) regions. However, it is lower for individuals living in nontribal areas (83.4 %) than for those living in tribal areas (100 %).

Similarly, individuals in the study area have a low level of sociocultural globalization (Table A.5.3 in the Appendix). It is more prevalent among females (74.6 %), the elderly (94.1 %), widowed individuals (93.3 %), the ST category (93.3 %), and Christian communities (100 %) than others. This could be because they (females, the elderly, widowed people, and STs) are marginalized and reliant on others, with less exposure to the rest of the world's socioeconomic opportunities. Individuals who live in nuclear families (80 %) are more exposed to a low level of sociocultural globalization than those who live in joint families (62.4 %). Moreover, individuals living in rural (78.3 %), coastal (78 %), tribal (100 %), and nonindustrial (83.5 %) regions are more exposed to low levels of sociocultural globalization than those residing in other regions.

Individuals have moderate levels of psychological globalization, and gender equality exists in this context (Table A.5.4). That means an equal proportion of males (83.7 %) and females (83 %) enjoy a moderate level of psychological globalization. However, the elderly (92.4 %), married individuals (85.9 %), the OBC category (85.4 %), and Christian communities (94.9 %) are more exposed to moderate levels of psychological globalization than others. Further, this moderate level of psychological globalization is higher for individuals residing in rural (87.3 %), noncoastal (85 %), and tribal regions (95.4 %).

Similarly, individuals in the study area have a moderate level of environmental globalization (Table A.5.5), with a slightly higher percentage of females (64 %) than males (61.7 %) being more exposed to moderate levels of it. These moderate levels of environmental globalization are more prevalent among the elderly (84.9 %), widowed individuals (80 %), the ST category (86.6 %), and Christian communities (96.2 %) than others. A higher percentage of individuals living in nuclear families (69.3 %) are more exposed to moderate levels of environmental globalization than those living in joint families (53 %), while such moderate levels of environmental globalization are higher for individuals living in urban (74 %), coastal (67 %), tribal (96.3 %), and nonindustrial (74.9 %) regions than for those residing in rural (60.7 %), noncoastal (61.8 %), nontribal (55 %), and industrial (4 %) regions.

The study checked pre-diagnostic tests like the multicollinearity test, the endogeneity test developed by Durbin (1954) and Wu and Hausman (Wu, 1974; Hausman, 1978), the heteroskedasticity test by Breusch and Pagan (1979) and Cook and Weisberg (1983), and the normality test by Jarque and Bera (1987); the results are presented in Tables A.6 and A.7 in the Appendix. The results reveal that the model is free from problems of multicollinearity and endogeneity, while heteroskedasticity and nonnormality are present. In order to address the problems of heteroskedasticity and nonnormality, beta regression was used in the study. Table 3 depicts the results of both the beta regression model and the

Table 2
Descriptive Statistics

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
IHDI	579	0.490	0.109	0.246	0.930
IECOGI	579	0.062	0.115	0	0.333
ISCGI	579	0.173	0.115	0.001	0.444
IPGI	579	0.572	0.179	0	1
IENVGI	579	0.694	0.164	0	1
Gender	579	1.494	0.511	1	4
Age	579	40.642	14.253	18	85
Marital Status	579	1.896	0.499	1	4
Caste	579	2.544	1.017	1	4
Religion	579	1.275	0.685	1	3
Family Type	579	0.404	0.491	0	1
Urban	579	0.143	0.351	0	1
Coastal	579	0.173	0.378	0	1
Industrial	579	0.173	0.378	0	1
Tribal	579	0.187	0.390	0	1

Source: Authors' calculation.

Table 3
Regression Results

IHDI	Beta Regression		Fractional Probit Regression	
	Coefficient	Average Marginal Effect	Coefficient	Average Marginal Effect
IECOGI	−0.349 (0.274)	−0.063 (0.056)	−0.222 (0.184)	−0.067 (0.057)
ISCGI	2.143* (0.294)	0.482* (0.055)	1.338* (0.191)	0.484* (0.057)
IPGI	0.076 (0.119)	−0.012 (0.022)	0.039 (0.075)	−0.013 (0.021)
IENVGI	0.175 (0.158)	0.099* (0.027)	0.096 (0.101)	0.096* (0.026)
Gender				
Female	−0.295** (0.149)	−0.038* (0.006)	−0.199** (0.090)	−0.037* (0.006)
Prefer not to say	0.220 (0.282)		0.141* (0.054)	
Gender*IECOGI				
Female	0.179 (0.297)		0.102 (0.180)	
Prefer not to say	0		0	
Gender*ISCGI				
Female	−0.315 (0.358)		−0.192 (0.208)	
Prefer not to say	0		0	
Gender*IPGI				
Female	−0.257*** (0.146)		−0.148*** (0.084)	
Prefer not to say	0		0	
Gender*IENVGI				
Female	0.478** (0.205)		0.311* (0.120)	
Prefer not to say	0		0	
Age Group				
18–35	0.270* (0.037)	0.066* (0.009)	0.171* (0.022)	0.067* (0.009)
36–53	0.111* (0.033)	0.027* (0.008)	0.070* (0.020)	0.027* (0.008)
Marital Status				
Married	0.002 (0.039)	0.001 (0.010)	0.003 (0.024)	0.001 (0.009)
Widowed	−0.006 (0.083)	−0.001 (0.020)	−0.004 (0.036)	−0.002 (0.014)
Caste				
OBC	−0.066*** (0.035)	−0.016*** (0.009)	−0.040*** (0.023)	−0.015*** (0.009)
SC	−0.075** (0.038)	−0.018** (0.009)	−0.046*** (0.026)	−0.018*** (0.010)
ST	−0.164* (0.050)	−0.040* (0.012)	−0.103* (0.031)	−0.040* (0.012)
Religion				
Muslim	0.607* (0.180)	0.144* (0.041)	0.271 (0.233)	0.104 (0.088)
Christian	0.277* (0.076)	0.067* (0.018)	0.174* (0.042)	0.067* (0.016)
Family Type				
Joint	0.042*** (0.025)	0.010*** (0.006)	0.026*** (0.015)	0.010*** (0.006)
Urban				
Urban	0.091** (0.043)	0.022** (0.010)	0.057** (0.028)	0.022** (0.011)
Coastal				
Coastal	−0.010 (0.037)	−0.002 (0.009)	−0.006 (0.023)	−0.002 (0.009)
Industrial				
Industrial	−0.016 (0.072)	−0.004 (0.017)	−0.006 (0.043)	−0.002 (0.017)
Tribal				
Tribal	−0.196* (0.062)	−0.048* (0.015)	−0.125* (0.035)	−0.049* (0.014)
Constant	−0.576 (0.128)		−0.350 (0.075)	
Diagnostic Tests	LR $\chi^2(24) = 591.22$ Prob > $\chi^2 = 0.000$ Log-likelihood = 760.486 Number of observations = 579		Wald $\chi^2(24) = 3793.02$ Prob > $\chi^2 = 0.000$ Log-pseudolikelihood = −392.352 Pseudo R ² = 0.022 Number of observations = 579	

Notes: *, **, and *** represent significance at 1%, 5%, and 10% levels, respectively. Standard errors are given in parentheses.

Source: Authors' estimation.

fractional probit regression model. The fractional probit regression model is used to check the robustness of the results. Since the *coefficient* of beta regression determines the direction of the results and not the magnitude of the effect from these results, the *average marginal effect* of beta regression is interpreted. It is shown in Table 3 that sociocultural globalization increases the human development of the individual by 0.482. This indicates that being exposed to a variety of foreign cultures and lifestyles has an impact on an individual's health, education, and income, and therefore human development by influencing his/her values, beliefs, and cultural practices. Similarly, environmental globalization increases the human development of the individual by 0.099. This implies that the individual, being integrated with the rest of the world, has gained certain information about the environmental degradation or protection of the natural environment happening across the globe and its direct positive impact on his/her health, education, and income, which leads to a change in human development. However, neither economic nor psychological globalization is found to have a significant impact on human development at the individual level.

Females have lower levels of human development than males by 0.038. This may be due to the fact that females have lower labour force participation, lower wage earnings, and less access to social protection like healthcare facilities than males. However, the effect of environmental globalization on human development is stronger for females than males. This is because females are more sensitive to the environment as it affects their lifestyles, health, livelihood, safety, and security more than males (UN Women, 2022). Thus, they try to gain more information on environmental issues that positively influence their health, education, and income, and hence their human development. In contrast, the effect of psychological globalization on human development is weaker/lower for females than for males. One possible reason for this is that globalization dominates the traditional local cultural values and gender norms that affect health (by creating tension, stress, and overthinking) and thereby affects the human development of women more than that of men. Moreover, individuals in the 18–35 and 36–53 age groups have higher levels of human development (by 0.066 and 0.027, respectively) than those in the over-54 age group. This implies that adults (young people) and middle-aged individuals enjoy a higher level of human development than the elderly. This is because adults and middle-aged individuals are in better physical health, have better cognitive skills to acquire knowledge, and are financially more active than the elderly. The elderly are comparatively less economically active and less healthy than young and middle-aged people, which reduces their level of human development. Wang, Sung, and Liu (2022) also supported these findings by stating that as people become old, their human development is reduced in the People's Republic of China (PRC).

On the other hand, individuals who belong to OBC, SC, and ST categories have lower levels of human development (by 0.016, 0.018, and 0.040, respectively) than those who belong to unreserved categories. This is because the caste system in India represents a historically deep-rooted social stigma where individuals belonging to lower-caste categories (i.e., OBC, SC, and ST) have faced greater socioeconomic discrimination and marginalization in terms of access to high-quality education, formal employment opportunities, healthcare services, and other resources than those in unreserved categories. Further, individuals from lower-caste categories are hierarchically deprived of accessing different socioeconomic opportunities and are not aware of their basic rights (employment, education, and healthcare). Thus, these factors force them to experience a lower level of human development. The study by Mosse (2018) is in line with these findings.

Individuals belonging to Muslim and Christian communities have higher levels of human development by 0.144 and 0.067, respectively, than those belonging to Hindu communities. This is due to the fact that there are generally fewer people in Muslim and Christian communities than in Hindu communities (who are dispersed throughout the country), and they form a cohesive unit in which they help each other in different socioeconomic aspects. This contributes to their human development

more than in Hindu communities. However, individuals living in joint families enjoy higher levels of human development by 0.010 than those living in nuclear families. This is because an individual living in a joint family enjoys more care and love from members of the family when they are ill, more moral support at times of financial loss, and good mentoring and guidance when studying, all of which enhance his/her human development. In regard to geo-socioeconomic regions, individuals residing in urban areas enjoy a higher level of human development by 0.022 than those living in rural areas. One possible reason for this is that urban areas are equipped with better infrastructure facilities and are more technologically advanced, enabling them to provide better employment opportunities, income, education, and health than rural areas. However, individuals from tribal regions enjoy a lower level of human development by 0.048 than those from nontribal regions. This may be due to the fact that tribal regions have limited infrastructure, are far from the city, and lack access to basic services, including healthcare, education, sanitation, transportation, and job opportunities.

5. Conclusions and policy suggestions

Global development argument emphasizes addressing collective issues like gender inequality in socioeconomic development at the ground level by focusing on the role of globalization. This calls for a context-specific analysis of understanding the gender perspective of globalization and human development. The present study, therefore, investigates the effect of globalization on the development of individuals addressing gender inequality in a growing region like Odisha, India. This study has brought a new dimension to the argument of development issues by addressing the gender perspective of globalization. The findings reveal that sociocultural globalization and environmental globalization have a positive impact on human development at the individual level. The positive impact of sociocultural globalization on human development is due to the access to diverse cultural ideas and practices, education, and skills development through global media and communication technologies. In fact, sociocultural globalization sensitizes women about their rights, power, and freedom. As a result, it helps to raise their voice against any sort of injustice meted out to them. This will improve their bargaining power and, as a result, can enhance their human development. However, these benefits can be reaped by regions (mainly urban and industrial) that have strong digital infrastructures, substantial levels of education, and policies that support cultural exchange. On the other hand, these beneficial effects might be lessened or even cause cultural tensions in regions with poor access to technology. Similarly, environmental globalization facilitates the acquisition and sharing of knowledge, ideas, and practices on environmental protection and management. This, in turn, enhances health, economic participation, and thereby human development. However, the degree of these benefits is highly reaped by regions with strong governance systems and local environmental policies, while regions lacking institutional support may not fully benefit from it.

However, economic globalization and psychological globalization are found to have no significant impact on human development at the individual level. Further, females have a lower level of human development than males. The effect of environmental globalization on human development is stronger for females than males. In contrast, the effect of psychological globalization on human development is weaker for females than for males. Adults (young people) and middle-aged individuals have higher levels of human development than elderly individuals. On the other hand, individuals from OBC, SC, and ST categories have lower levels of human development than those from the unreserved category. However, individuals belonging to Muslim and Christian communities have higher levels of human development than those from Hindu communities. This could be a limitation of the study because the sample size of Muslims and Christians is very limited in the sample of our study, which may lead to such kind of results. Individuals from joint families experience higher levels of human development than

those from nuclear families. Additionally, individuals living in urban areas enjoy higher levels of human development than those residing in rural areas. However, individuals living in tribal regions enjoy lower levels of human development than those residing in nontribal regions.

As concluded before, sociocultural and environmental globalization enhance human development at the individual level, while economic and psychological globalization have no significant impact. This implies that sociocultural globalization, driven by advances in information and communication technology, is widespread not only in Odisha but across India, thereby benefiting individuals. Similarly, environmental globalization in the forms of pandemics, diseases, pollution, climate change, global warming, and channels like Discovery and Animal Planet has been well recognized by the population, who are generally aware and concerned about these issues. However, economic globalization in terms of MNCs is concentrated mainly in urban areas and has not provided adequate employment opportunities to the broader population, limiting its benefits. Therefore, both state and local governments and policy-makers should prioritize the positive effects of sociocultural and environmental globalization by investing in programs (like local arts, cultural festivals, and integrating multicultural education), promoting cultural exchanges, ideas, and awareness about the environment. Further, small business or start-up programs, localized economic development strategies, and training programs should be implemented to enhance economic globalization and thereby human development. Besides, it can be seen that individuals from weaker sections of society, i. e., women, OBC, SC, and ST, have low levels of human development. Hence, it is suggested that both state and local governments, policy-makers, and other pressure groups should provide education and healthcare facilities, as well as employment opportunities, in a more inclusive way to these sections to improve their human development and achieve a more equitable society (in terms of gender equality).

Appendix

Table A1

List of Indicators

List of Indicators Used for Construction of Dimensions of Globalization at Individual Level

Dimension: Individual Economic Globalization

- 1 Receive income from other countries (remittances)
- 2 Work in a multinational or foreign-owned company
- 3 Work in the foreign-owned logistic company DHL¹
- 4 Work in the foreign-owned logistic company FedEx²
- 5 Work in the foreign-owned logistic company United Parcel Services (UPS)
- 6 Possess credit cards
- 7 Access to Internet banking
- 8 Possess digital payment apps like Google Pay, PayPal, Remit2India, Wise, Remitly, WorldRemit, Xoom, Azimo, Transfast, and TransferGo on a phone or laptop
- 9 Trade in the stock market or trade in cryptocurrency
- 10 Possessing any foreign currency or not
- 11 Deposit money in the bank of a foreign country
- 12 Invest in a foreign country

Individual Sociocultural Globalization

Deliberate use and consumption of foreign products

- 1 Use foreign-originated mobile brands
- 2 Use foreign-originated mobile accessory brands
- 3 Use foreign-originated laptop brands
- 4 Use foreign-originated laptop accessory brands
- 5 Use foreign-originated television (TV) brands
- 6 Use foreign-originated electrical item brands
- 7 Use clothing products that are produced in foreign countries
- 8 Use cosmetic products that are produced in foreign countries
- 9 Own playing products (toys) that are produced in foreign countries
- 10 Use any plastic and ceramic products that are produced in foreign countries
- 11 Use foreign-originated vehicle brands
- 12 Intensity of the number of brand use index
- 13 Eat Lay's
- 14 Eat noodles like Maggi and Top Ramen
- 15 Drink beverage items like 7UP, Sprite, Pepsi, Mirinda, Mountain Dew, and Fanta

Additionally, since individuals from rural and tribal regions of Odisha have lower levels of human development, the government needs to improve the infrastructure facilities in these regions to help them reap the benefits of globalization and human development.

CRediT authorship contribution statement

Jayanti Behera: Writing – review & editing, Writing – original draft, Software, Resources, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Dukhabandhu Sahoo:** Writing – review & editing, Validation, Supervision, Methodology, Conceptualization.

Funding

This paper acknowledges the financial support of the Asian Development Bank Institute (ADBI).

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgment

We acknowledge the support of the respondents for sparing their time during data collection. We are also thankful to the Asian Development Bank Institute (ADBI), Tokyo, Japan, and the anonymous referees for their feedback and suggestions to improve the quality of the paper during different stages.

(continued on next page)

Table A1 (continued)

Presence of foreign companies where the individual lives	
16	Presence of Decathlon company in your area
17	Presence of Tesla company in your area
18	Presence of Ford company in your area
19	Presence of Honda company in your area
20	Presence of Suzuki company in your area
Presence of foreign restaurants and supermarkets where the individual lives	
21	Restaurants (e.g., Thai restaurants, Chinese restaurants) from different parts of the world are available in the area where you live
22	Food and beverages (from supermarkets like Walmart, shops, or bars) from different parts of the world are available in the area where you live
23	Clothing products (like Max Fashion) from different parts of the world are available in the area where you live
Availability of products or services produced by MNCs in the area where the individual lives	
24	Restaurants and cafes (e.g., KFC, McDonald's, Starbucks, Pizza Hut, Taco Bell [fast food], Domino's Pizza, Burger King, Wendy's [fast food], Popeyes [fried chicken fast food]) produced by multinational companies are available in the area where you live
25	Food and beverages (e.g., Coca-Cola, Pepsi, Nestlé) produced by multinational companies are available in the area where you live
26	Clothing products (e.g., Nike, Zara, Adidas, Levi's) produced by multinational companies are available in the area where you live
Participation in global communication flows and mass communication	
27	Access to the Internet
28	Use mobile (Call & SMS) services to contact people living in other parts of your country or people living in other/foreign countries
29	Use telephone services to contact people living in other parts of your country or people living in other/foreign countries
30	Use Email/Fax services to contact people living in other parts of your country or people living in other/foreign countries
31	Use social media services to contact people living in other parts of your country or people living in other/foreign countries
32	Have social media account ID (Meta, X, Instagram, Snapchat, TikTok, YouTube, and WhatsApp)
33	Watch or listen to foreign programs on TV/radio
34	Watch foreign-language movies and web series, and listen to songs (through YouTube, Disney Hotstar, Netflix, and Amazon Prime)
35	Watch MTV and Cartoon network channel
36	Listen to music made by artists from other countries (through Spotify, YouTube Music, Gaana, Wynk)
37	Watch/listen to an international news source through YouTube (CNN International, BBC World, Euronews)
38	Read an international news source (The New York Times, The Guardian, The Wall Street Journal, Time, The Economist)
39	Read an international magazine other than a news-related publication, e.g., a style or sports magazine (Cosmopolitan, National Geographic)
40	Read a book written by an author from another country
41	Read international research papers and journals
42	Attending virtual meetings, seminars, conferences, symposiums, and workshops with foreign individuals
43	Visit shopping sites (Amazon, Flipkart, Myntra, Ajio, Nykaa)
44	Visit reading websites (LinkedIn, Udemy, Coursera, Khan Academy, edX, Goodreads, Pinterest)
45	Following international sports events (e.g., Olympic Games, World Cup [Cricket World Cup, Hockey World Cup, Football World Cup], and Commonwealth Games)
46	Following international cultural events or international trade fairs
47	Searching for jobs (LinkedIn)
48	Use Zoom software for videoconferencing/meetings/seminars/conferences
49	Use Microsoft Teams software for videoconferencing/meetings/seminars/conferences
50	Use Google Meet software for video conferencing/meetings/seminars/conferences
51	Use WebEx by Cisco software for videoconferencing/meetings/seminars/conferences
52	Use Skype software for videoconferencing/meetings/seminars/conferences
53	Use any other software for videoconferencing/meetings/seminars/conferences
Knowledge of international lingua franca (mainly English)	
54	Speak a foreign language like English
55	Understand a foreign language like English but not fluent in speaking it
56	Write a foreign language like English
Global or supranational mobility	
57	Studying/studied in a foreign country
58	Possess a passport
59	Travel either for work or for vacation to other countries within my continent
60	Travel either for work or for vacation to other countries outside my continent
61	Born in a country different than India
62	Parents or family members or relatives born in a country different than India
Individual Psychological Globalization	
1	Observed changes in dressing style over period of time
2	Influenced by Western dressing style
3	Call your father and mother Daddy and Mommy
4	Preference for foreign-originated foods like pizza, burgers, sizzlers, sandwiches, pasta, spaghetti, burritos, garlic bread, pancakes, doughnuts, meatballs, chicken fingers, cheese fingers, and cheesecake
5	Prefer to celebrate birthday by cutting the cake
6	Feel that people are isolating themselves day by day
Individual Environmental Globalization	
1	Concerned about global warming
2	Concerned about climate change
3	Concerned about dangerous diseases (e.g., COVID-19, HIV, SARS, bird flu)
4	Concerned about protection of the natural environment (afforestation and waste disposal [not spreading plastic])
5	Watching the Discovery Channel, National Geography, and Animal Planet channels

^a DHL: Dalsey, Hillblom, and Lynn is the world's leading logistics company.

^b FedEx: Federal Express Corporation.

Source: Authors' construction with the help of literature (Caselli, 2012; Grimalda, Buchan, & Brewer, 2018).

Table A2
Descriptions of Variables

Variables	Descriptions	Nature of Variables
Dependent Variable		
IHDI	Individual Human Development Index	Ratio
Independent Variables		
IOGI	Individual Overall Globalization Index	Ratio
IECOGI	Individual Economic Globalization Index	Ratio
ISCGI	Individual Sociocultural Globalization Index	Ratio
IPGI	Individual Psychological Globalization Index	Ratio
IENVGI	Individual Environmental Globalization Index	Ratio
Control Variables		
Age Group	Age group of the individual (In years) 1. 18–35 (41 %) 2. 36–53 (38 %) 3. >= 54 (21 %)	Qualitative; Reference Category = >= 54 Dummy, 1 = 18–35, 0 = Otherwise Dummy, 1 = 36–53, 0 = Otherwise
Gender	Gender of the individual 1. Male (50.95 %) 2. Female (48.88 %) 3. Transgender (0 %) 4. Prefer not to say (0.17 %)	Qualitative; Reference Category = Male Dummy, 1 = Female, 0 = Otherwise Dummy, 1 = Transgender, 0 = Otherwise Dummy, 1 = Prefer not to say, 0 = Otherwise
Marital Status	Marital status of the individual 1. Unmarried (15 %) 2. Married (82 %) 3. Divorced (3 %) 4. Widowed (0 %) 5. Separated (0 %) 6. Others (0 %)	Qualitative; Reference Category = Unmarried Dummy, 1 = Married, 0 = Otherwise Dummy, 1 = Divorced, 0 = Otherwise Dummy, 1 = Widowed, 0 = Otherwise Dummy, 1 = Separated, 0 = Otherwise Dummy, 1 = Others, 0 = Otherwise
Caste Category	Caste of the individual Unreserved/General (16 %) Other Backward Class (OBC) (37 %) Scheduled Caste (SC) (24 %) Scheduled Tribe (ST) (23 %)	Qualitative; Reference Category: Unreserved/General Dummy, 1 = OBC, 0 = Otherwise Dummy, 1 = SC, 0 = Otherwise Dummy, 1 = ST, 0 = Otherwise
Religion	Religion of the individual 1. Hindu (86 %) 2. Muslim (1 %) 3. Christian (13 %) 4. Others (0 %) 5. Do not know (0 %)	Qualitative; Reference Category: Hindu Dummy, 1 = Muslim, 0 = Otherwise Dummy, 1 = Christian, 0 = Otherwise Dummy, 1 = Others, 0 = Otherwise Dummy, 1 = Do not know, 0 = Otherwise
Family Type	Family type of the individual 1. Joint Family (40 %) 2. Nuclear Family (60 %)	Qualitative; Reference Category: Nuclear Family
Dummy Variables		
Urban	The individual belongs to which place? 1. Urban (14 %) 2. Rural (86 %)	Qualitative; Reference Category: Rural
Coastal	The individual belongs to which areas? 1. Coastal (17 %) 2. Noncoastal (83 %)	Qualitative; Reference Category: Noncoastal
Industrial	The individual belongs to which region? 1. Industrial (17 %) 2. Nonindustrial (83 %)	Qualitative; Reference Category: Nonindustrial
Tribal	The individual belongs to which zone? 1. Tribal (19 %) 2. Nontribal (81 %)	Qualitative; Reference Category: Nontribal

Source: Authors' construction.

Table A3
Data Cleaning Process

Procedures	Works
Step 1	Identified the respondents/individuals through appropriate sampling techniques
Step 2	Collected the data through a structured survey schedule by canvassing it to each individual
Step 3	Entered the data from the survey schedule in MS Excel
Step 4	Imported dataset from MS Excel to STATA
Step 5	Label the variables in STATA
Step 6	Summarized and tabulated data to check the missing values in the dataset and checked duplicate records
Step 7	Found only one missing value in the dataset
Step 8	Converted the data which was in ordered form (i.e., a 5-Likert scale) into binary form (i.e., 0 & 1). That is the Likert scale values of 3, 2, and 1 are converted to 1, and the Likert scale values of 4 and 5 are converted to 0.
Step 9	Normalized the variables through the formula $\left(\frac{\text{ActualValue} - \text{MinimumValue}}{\text{MaximumValue} - \text{MinimumValue}} \right)$
Step 10	Estimated the proposed relationship using data

Source: Authors' construction.

Table A4
Matrix of Correlations

Variables	IHD	IECOGI	ISCGI	IPGI	IENVGI	Gender	Age Group	Marital Status	Caste	Religion	Family Type	Urban	Coastal	Industrial
IECOGI	0.441*	1.000												
ISCGI	0.736*	0.689*	1.000											
IPGI	0.171*	-0.116*	0.206*	1.000										
IENVGI	0.586*	0.590*	0.702*	-0.033	1.000									
Gender	-0.185*	-0.057	-0.075***	0.068***	-0.020	1.000								
Age Group	-0.424*	-0.204*	-0.363*	-0.134*	-0.327*	-0.066	1.000							
Marital Status	-0.334*	-0.163*	-0.330*	-0.058	-0.325*	-0.002	0.397*	1.000						
Caste	-0.254*	-0.009	-0.289*	-0.143*	-0.148*	-0.017	0.091**	0.074***	0.553*	1.000				
Religion	-0.243*	-0.172*	-0.384*	-0.131*	-0.195*	0.030	0.022	0.051	0.073***	0.161*	1.000			
Family Type	0.143*	0.233*	0.217*	0.102*	0.114*	0.019	0.136*	0.030	0.013	-0.183*	0.055	1.000		
Urban	0.122*	-0.175*	0.108*	0.419*	-0.071***	0.005	0.032	0.031	-0.248*	-0.150*	0.024	-0.187*	1.000	
Coastal	0.026	-0.139*	0.081**	0.114*	-0.144*	0.014	-0.136*	-0.079**	0.043	-0.177*	0.229*	-0.187*	-0.209*	1.000
Industrial	0.339*	0.839*	0.542*	-0.376*	0.558*	-0.029	0.064	0.091*	0.420*	0.818*	-0.178*	-0.196*	-0.219*	-0.219*
Tribal	-0.370*	-0.227*	-0.513*	-0.209*	-0.262*									

Note: *, **, and *** represent significance at 1 %, 5 %, and 10 % levels, respectively.

Source: Authors' calculation.

Table A5

Cross-tabulation of Individual Overall Globalization and its Four Dimensions with Geo-sociodemographic Characteristics (%) Table A.5.1: Cross-tabulation of Individual Overall Globalization with Geo-sociodemographic Characteristics (%)

		Cross-tabulation (in %)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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		Male		Female	Prefer not to say	15-35	36-54	55 and above	Unmarried	Married	Widowed	Unreserved	OBC	ST	Hindu	Muslim	Christian	Nuclear	Joint	Rural	Urban	Noncoastal	Coastal	Nonindustrial	Industrial	Nontribal	Tribal	Total	Total																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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	<0.25	3	1.5	0	8	2	2	4	8	0	7	1	8	0	1.4	0.5	6.7	1.4	0.0	1.4	2.9	0.7	1.4	1.4	0.0	1.3	7	0	1	8	7	1	8	0	8	4	4	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8

Note: * and ** represent significance at 1 % and 5 % levels, respectively.

Source: Authors' estimation.

Table A5.2
Cross-tabulation of Individual Economic Globalization with Geo-sociodemographic Characteristics (%)

	Gender		Total	Age Group		Total	Marital Status		Total	Religion		Total	Family Type		Total	Place		Total	Region		Total	Areas		Total	Zone		Total								
	Male	Female		18-35	36-53		54 and above	Unmarried		Married	Widowed		Hindu	Muslim		Christian	Nuclear		Joint	Rural		Urban	Noncoastal		Coastal	Nonindustrial		Industrial	Nontribal	Tribal					
HCGOI	Count	255	245	1	501	198	190	113	501	74	412	15	501	86	192	96	127	501	421	2	78	501	321	180	501	418	83	501	497	24	501	393	108	501	
	within	86.4	86.6	100.0	86.5	83.5	85.2	95.0	86.5	82.2	86.9	100.0	86.5	92.5	90.6	68.6	94.8	86.5	84.5	66.7	100.0	86.5	93.0	76.9	86.5	84.3	100.0	86.5	97.6	24.0	86.5	83.4	100.0	86.5	
	of Total	44.0	42.3	0.2	86.5	34.2	32.8	19.8	86.5	12.8	11.7	2.6	86.5	14.9	33.2	16.6	21.9	86.5	72.7	0.3	13.5	86.5	55.4	31.4	86.5	72.2	14.3	86.5	69.3	17.3	86.5	67.9	18.7	86.5	
	Count	40	38	0	78	39	33	6	78	16	62	0	78	7	20	44	7	78	77	1	0	78	24	54	78	2	76	78	0	78	2	76	78	0	78
	within	13.6	13.4	0.0	13.5	16.5	14.8	5.0	13.5	17.8	13.1	0.0	13.5	7.5	9.4	7.1	5.2	13.5	15.5	33.3	0.0	13.5	7.0	23.1	13.5	15.7	0.0	13.5	16.3	0.0	13.5	16.6	0.0	13.5	
of Total	6.9	6.6	0.0	13.5	6.7	5.7	1.0	13.5	2.8	10.7	0.0	13.5	1.2	3.5	3.6	1.2	13.5	13.3	0.2	0.0	13.5	4.1	9.3	13.5	13.5	0.0	13.5	13.5	0.0	13.5	0.4	76.0	13.5	0.0	13.5
Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
within	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
of Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Count	295	283	1	579	237	223	119	579	90	474	15	579	93	212	140	134	579	498	3	78	579	345	234	579	496	83	579	479	100	579	471	108	579		
within	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
Total	Count	50.9	48.9	0.2	100.0	40.9	38.5	20.6	100.0	15.5	81.9	2.6	100.0	16.1	36.6	24.2	23.1	100.0	86.0	0.5	13.5	100.0	59.6	40.4	100.0	85.7	14.3	100.0	82.7	17.3	100.0	81.3	18.7	100.0	
Pearson χ^2 Contingency Coefficient Kendall's tau-b	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158	0.158		
	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017	0.017			
	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003		

Note: * and *** represent significance at 1 % and 10 % levels, respectively.
Source: Authors' estimation.

Table A5.3
Cross-tabulation of Individual Sociocultural Globalization with Geo-sociodemographic Characteristics (%)

	Gender		Total	Age Group		Total	Marital Status		Total	Religion		Total	Family Type		Total	Place		Region		Total	Areas		Total	Zone	
	Male	Female		18-35	36-53		54 and above	Unmarried		Married	Widowed		Hindu	Muslim		Christian	Nuclear	Joint	Rural		Urban	Noncoastal		Coastal	Nonindustrial
<=0.25	Count within	210 211	1 422	139 171	112 422	31 377	14 422	61 188	78 125	422 344	0 78 422	276 146	422 276	61 188	78 125	422 344	57 422	344 78	422 400	22 422	314 108	422 422	22 422	314 108	
	Total	71.2 74.6	100.0 72.9	58.6 76.7	94.1 72.9	34.4 79.5	93.3 72.9	65.6 74.5	55.7 93.3	72.9 69.1	100.0 72.9	80.0 62.4	72.9 73.6	68.7 72.9	71.8 78.0	72.9 83.5	72.9 71.8	78.0 72.9	83.5 72.9	22 422	66.7 100.0	72.9 72.9	22 422	66.7 100.0	
0.26-0.75	Count within	36.3 36.4	0.2 72.9	24.0 29.5	19.3 72.9	5.4 65.1	2.4 72.9	10.5 27.3	13.5 21.6	72.9 59.4	0.0 13.5 72.9	47.7 25.2	72.9 63.0	9.8 72.9	59.4 13.5	72.9 69.1	13.5 72.9	69.1 13.5	72.9 69.1	3.8 72.9	54.2 18.7	72.9 72.9	3.8 72.9	54.2 18.7	
	Total	11.7 11.8	1.6 16.0	8.0 10.0	6.4 14.0	1.5 15.5	0.7 7.5	3.4 8.5	4.4 10.0	10.0 10.0	0.0 13.5 10.0	10.0 10.0	10.0 10.0	10.0 10.0	10.0 10.0	10.0 10.0	10.0 10.0	10.0 10.0	10.0 10.0	0.0 10.0	10.0 10.0	10.0 10.0	0.0 10.0	10.0 10.0	
0.76+	Count within	85 72	0 157	98 52	7 157	59 97	1 157	32 54	62 9	157 154	3 0 157	69 88	157 69	32 54	62 9	157 154	26 157	135 22	157 79	157 79	157 79	157 79	157 79		
	Total	27.7 27.7	0.0 21.1	14.1 14.1	2.3 14.1	1.7 11.4	0.3 1.0	10.1 10.1	10.1 10.1	10.1 10.1	0.0 13.5 10.1	10.1 10.1	10.1 10.1	10.1 10.1	10.1 10.1	10.1 10.1	10.1 10.1	10.1 10.1	10.1 10.1	0.0 10.1	10.1 10.1	10.1 10.1	0.0 10.1	10.1 10.1	
Total	Count within	295 283	1 579	237 223	119 579	90 474	15 579	93 212	140 134	579 498	3 78 579	345 234	579 345	93 212	140 134	579 498	83 579	479 100	579 479	471 108	579 471	479 108	479 108		
	Total	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0	100.0 100.0		
Pearson χ^2	1.204	1.204	55.073*	81.075*	40.737*	40.737*	51.892*	40.737*	40.737*	21.871*	40.737*	18.869	21.871*	40.737*	40.737*	18.869	14.3 100.0	82.7 17.3	100.0 82.7	17.3 100.0	82.7 17.3	100.0 82.7	17.3 100.0	82.7 17.3	
Contingency Coefficient	0.066	0.066	0.290*	0.356*	0.256*	0.256*	0.290*	0.256*	0.256*	0.194*	0.256*	0.194*	0.194*	0.256*	0.256*	0.194*	0.053 0.053	0.053 0.053	0.053 0.053	0.053 0.053	0.053 0.053	0.053 0.053	0.053 0.053		
Kendall's tau-b	0.040	0.040	-0.286*	-0.361*	-0.286*	-0.286*	-0.286*	-0.286*	-0.286*	-0.194*	-0.286*	-0.194*	-0.194*	-0.286*	-0.286*	-0.194*	-0.053 -0.053	-0.053 -0.053	-0.053 -0.053	-0.053 -0.053	-0.053 -0.053	-0.053 -0.053	-0.053 -0.053		

Note: * and ** represent significance at 1 % and 5 % levels, respectively.
Source: Authors' estimation.

Table A5.4
Cross-tabulation of Individual Psychological Globalization with Geo-sociodemographic Characteristics (%)

	Gender		Total	Age Group 18-35 36-53 54 and above	Total	Marital Status		Total	Religion		Total	Family Type		Total	Place		Total	Region		Total	Arees Nonindustrial	Total	Zones Tribal bal	Total
	Male	Female				Unmarried	Married		Widowed	Hindus		Muslim	Christian		Nuclear	Joint		Rural	Urban					
≤0.25	Count	14	6	21	5	15	1	21	7	5	4	21	0	1	21	17	4	21	18	3	21	5	16	21
	within of Total	4.7	2.1	100.0	3.6	4.2	2.2	5.0	3.6	5.6	3.2	6.7	3.6	7.5	2.4	3.6	3.0	3.6	4.0	0.0	1.3	3.6	4.0	1.9
0.26 - 0.75	Count	247	235	0	482	714	988	110	482	63	407	12	482	60	181	115	126	482	433	49	482	407	75	482
	within of Total	83.7	83.0	0.0	83.2	73.4	98.8	92.4	83.2	70.0	85.9	80.0	83.2	83.2	64.5	85.8	82.1	94.4	83.2	81.7	33.3	94.9	83.2	80.5
0.76+	Count	42	47	406	0	832	301	342	19	832	21	832	104	31	104	13	199	218	832	70.3	0.2	12.8	83.2	491
	within of Total	11.5	14.8	0.0	76.6	55.1	22	52	2	76	22	52	2	76	26	26	20	4	76	71	2	12.8	83.2	491
Total	Count	519	519	133	92	3	131	4	519	90	474	15	519	93	212	140	134	519	498	3	78	519	345	234
	within of Total	51.9	51.9	13.3	9.2	3.5	13.1	4.5	45.3	3.5	13.1	14.3	66.7	3.8	13.1	12.8	13.7	13.1	8.5	41.1	9.3	3.8	13.1	13.1
Total	Count	295	283	1	579	237	223	119	579	90	474	15	579	93	212	140	134	579	496	83	579	479	100	579
	within of Total	50.0	48.0	0.0	100.0	40.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Contingency Coefficient	χ ²	30.38	48.9	0.2	100.0	40.9	38.5	20.6	100.0	15	81.9	2.6	100.0	16.1	36.6	24.2	23.1	100.0	86.7	14.3	100.0	87.3	17.3	100.0
	Contingency Coefficient	0.224*	0.156*	0.048	0.134*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*
Pearson's χ ²	Count	14	6	21	5	15	1	21	7	5	4	21	0	1	21	17	4	21	18	3	21	5	16	21
	within of Total	4.7	2.1	100.0	3.6	4.2	2.2	5.0	3.6	5.6	3.2	6.7	3.6	7.5	2.4	3.6	3.0	3.6	4.0	0.0	1.3	3.6	4.0	1.9
Pearson's χ ²	Count	247	235	0	482	714	988	110	482	63	407	12	482	60	181	115	126	482	433	49	482	407	75	482
	within of Total	83.7	83.0	0.0	83.2	73.4	98.8	92.4	83.2	70.0	85.9	80.0	83.2	83.2	64.5	85.8	82.1	94.4	83.2	81.7	33.3	94.9	83.2	80.5
Pearson's χ ²	Count	42	47	406	0	832	301	342	19	832	21	832	104	31	104	13	199	218	832	70.3	0.2	12.8	83.2	491
	within of Total	11.5	14.8	0.0	76.6	55.1	22	52	2	76	22	52	2	76	26	26	20	4	76	71	2	12.8	83.2	491
Pearson's χ ²	Count	519	519	133	92	3	131	4	519	90	474	15	519	93	212	140	134	519	498	3	78	519	345	234
	within of Total	51.9	51.9	13.3	9.2	3.5	13.1	4.5	45.3	3.5	13.1	14.3	66.7	3.8	13.1	12.8	13.7	13.1	8.5	41.1	9.3	3.8	13.1	13.1
Total	Count	295	283	1	579	237	223	119	579	90	474	15	579	93	212	140	134	579	496	83	579	479	100	579
	within of Total	50.0	48.0	0.0	100.0	40.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Contingency Coefficient	χ ²	30.38	48.9	0.2	100.0	40.9	38.5	20.6	100.0	15	81.9	2.6	100.0	16.1	36.6	24.2	23.1	100.0	86.7	14.3	100.0	87.3	17.3	100.0
	Contingency Coefficient	0.224*	0.156*	0.048	0.134*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*
Pearson's χ ²	Count	14	6	21	5	15	1	21	7	5	4	21	0	1	21	17	4	21	18	3	21	5	16	21
	within of Total	4.7	2.1	100.0	3.6	4.2	2.2	5.0	3.6	5.6	3.2	6.7	3.6	7.5	2.4	3.6	3.0	3.6	4.0	0.0	1.3	3.6	4.0	1.9
Pearson's χ ²	Count	247	235	0	482	714	988	110	482	63	407	12	482	60	181	115	126	482	433	49	482	407	75	482
	within of Total	83.7	83.0	0.0	83.2	73.4	98.8	92.4	83.2	70.0	85.9	80.0	83.2	83.2	64.5	85.8	82.1	94.4	83.2	81.7	33.3	94.9	83.2	80.5
Pearson's χ ²	Count	42	47	406	0	832	301	342	19	832	21	832	104	31	104	13	199	218	832	70.3	0.2	12.8	83.2	491
	within of Total	11.5	14.8	0.0	76.6	55.1	22	52	2	76	22	52	2	76	26	26	20	4	76	71	2	12.8	83.2	491
Pearson's χ ²	Count	519	519	133	92	3	131	4	519	90	474	15	519	93	212	140	134	519	498	3	78	519	345	234
	within of Total	51.9	51.9	13.3	9.2	3.5	13.1	4.5	45.3	3.5	13.1	14.3	66.7	3.8	13.1	12.8	13.7	13.1	8.5	41.1	9.3	3.8	13.1	13.1
Total	Count	295	283	1	579	237	223	119	579	90	474	15	579	93	212	140	134	579	496	83	579	479	100	579
	within of Total	50.0	48.0	0.0	100.0	40.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Contingency Coefficient	χ ²	30.38	48.9	0.2	100.0	40.9	38.5	20.6	100.0	15	81.9	2.6	100.0	16.1	36.6	24.2	23.1	100.0	86.7	14.3	100.0	87.3	17.3	100.0
	Contingency Coefficient	0.224*	0.156*	0.048	0.134*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*
Pearson's χ ²	Count	14	6	21	5	15	1	21	7	5	4	21	0	1	21	17	4	21	18	3	21	5	16	21
	within of Total	4.7	2.1	100.0	3.6	4.2	2.2	5.0	3.6	5.6	3.2	6.7	3.6	7.5	2.4	3.6	3.0	3.6	4.0	0.0	1.3	3.6	4.0	1.9
Pearson's χ ²	Count	247	235	0	482	714	988	110	482	63	407	12	482	60	181	115	126	482	433	49	482	407	75	482
	within of Total	83.7	83.0	0.0	83.2	73.4	98.8	92.4	83.2	70.0	85.9	80.0	83.2	83.2	64.5	85.8	82.1	94.4	83.2	81.7	33.3	94.9	83.2	80.5
Pearson's χ ²	Count	42	47	406	0	832	301	342	19	832	21	832	104	31	104	13	199	218	832	70.3	0.2	12.8	83.2	491
	within of Total	11.5	14.8	0.0	76.6	55.1	22	52	2	76	22	52	2	76	26	26	20	4	76	71	2	12.8	83.2	491
Pearson's χ ²	Count	519	519	133	92	3	131	4	519	90	474	15	519	93	212	140	134	519	498	3	78	519	345	234
	within of Total	51.9	51.9	13.3	9.2	3.5	13.1	4.5	45.3	3.5	13.1	14.3	66.7	3.8	13.1	12.8	13.7	13.1	8.5	41.1	9.3	3.8	13.1	13.1
Total	Count	295	283	1	579	237	223	119	579	90	474	15	579	93	212	140	134	579	496	83	579	479	100	579
	within of Total	50.0	48.0	0.0	100.0	40.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Contingency Coefficient	χ ²	30.38	48.9	0.2	100.0	40.9	38.5	20.6	100.0	15	81.9	2.6	100.0	16.1	36.6	24.2	23.1	100.0	86.7	14.3	100.0	87.3	17.3	100.0
	Contingency Coefficient	0.224*	0.156*	0.048	0.134*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*	0.098*
Pearson's χ ²	Count	14	6	21	5	15	1	21	7	5	4	21	0	1	21	17	4	21	18	3	21	5	16	21
	within of Total	4.7	2.1	100.0	3.6	4.2	2.2	5.0	3.6	5.6	3.2	6.7	3.6	7.5	2.4	3.6	3.0	3.6	4.0	0.0	1.3	3.6	4.0	1.9
Pearson's χ ²	Count	247	235	0	482	714	988	110	482	63	407	12	482	60	181	115	126	482	433	49	482	407	75	482
	within of Total	83.7	83.0	0.0	83.2	73.4	98.8	92.4	83.2	70.0	85.9	80.0	83.2	83.2	64.5	85.8	82.1	94.4	83.2	81.7	33.3	94.9	83.2	80.5
Pearson's χ ²	Count	42	47	406	0	832	301	342	19	832	21	832	104	31	104	13	199	218	832	70.3	0.2	12.8	83.2	491
	within of Total	11.5	14.8	0.0	76.6	55.1	22	52	2	76	22	52	2	76	26	26	20	4	76	71	2	12.8	83.2	491
Pearson's χ ²	Count	519	519	133	92	3	131	4	519	90	474	15	519	93	212	140	134	519	498	3	78	519	345	234
	within of Total	51.9	51.9	13.3	9.2	3.5	13.1	4.5	45.3	3.5	13.1	14.3	66.7	3.8	13.1	12.8	13.7	13.1	8.5	41.1	9.3	3.8	13.1	13.1
Total	Count	295	283	1	579	237	223	119	579	90	474	15	579	93	212	140	134	579	496	83	579	479	100	579
	within of Total	50.0	48.0	0.0	100.0	40.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.						

Note: *, **, and *** represent significance at 1 %, 5 %, and 10 % levels, respectively.
Source: Authors' estimation.

Table A5.5
Cross-tabulation of Individual Overall Globalization with Geo-sociodemographic Characteristics (%)

[illegible]

Note: * and ** represent significance at 1 % and 5 % levels, respectively.
Source: Authors' estimation.

Table A6
Results of Pre-diagnostic Tests

Test of Multicollinearity	VIF	1/VIF
Industrial	5.633	0.178
IECOGI	5.560	0.180
ISCGI	5.317	0.188
Tribal	4.023	0.249
Religion	3.936	0.254
IENVGI	2.493	0.401
IPGI	2.086	0.479
Caste	1.784	0.561
Urban	1.759	0.568
Coastal	1.504	0.665
Age Group	1.492	0.670
Marital Status	1.340	0.746
Family Type	1.150	0.870
Gender	1.086	0.921
Mean VIF	2.797	
Test of Heteroskedasticity		
Breusch-Pagan/Cook-Weisberg test for heteroskedasticity	$\chi^2(1) = 13.65$ Prob > $\chi^2 = 0.000$	
Test of Normality		
Jarque-Bera normality test	Jarque-Bera normality test: 9.521 $\chi(2) = 0.009$	

Source: Authors' estimation.

Table A7
Endogeneity Test Results

Tests of Endogeneity	Durbin (score) $\chi^2(1) = 0.429$ (p = 0.512) Wu-Hausman F (1,553) = 0.410 (p = 0.522)			
Correlation of the Variables				
	IECOGI	ISCGI	IPGI	IENVGI
IHDI residuals	0.0021	0.1374	-0.0343	0.0676

Source: Authors' estimation.

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