

The screenshot shows the login page of the Etikonomi journal website. The browser address bar displays [journal.uinjkt.ac.id/index.php/etikonomi/login](http://journal.uinjkt.ac.id/index.php/etikonomi/login). The page features a green navigation bar with links: HOME, ABOUT, LOGIN, REGISTER, CATEGORIES, SEARCH, CURRENT, ARCHIVES, ANNOUNCEMENTS, PUBLICATION ETHICS, AUTHOR GUIDELINES, and REVIEWERS. The main content area is titled "LOGIN" and includes a "USER" sidebar with fields for Username (jjuhardi\_1959) and Password (masked), a "Remember me" checkbox, and a "Login" button. Below the login form, there are links for "Not a user? Register with this site" and "Forgot your password?". A large, colorful geometric logo is centered on the page. At the bottom, there are logos for Google Scholar, IPI, and AcademicKeys. The right sidebar contains a "Focus and Scope" menu with links to Peer Review Process, Editorial Team, Contact, and Indexing & Abstracting. Below this is a "JOURNAL CONTENT" section with a search bar and a "Browse" menu listing options like By Issue, By Author, By Title, Other Journals, and Categories. An "INFORMATION" section at the bottom right provides links for Readers and Authors.

The screenshot shows the author submission page of the Etikonomi journal website. The browser address bar displays [journal.uinjkt.ac.id/index.php/etikonomi/author/index](http://journal.uinjkt.ac.id/index.php/etikonomi/author/index). The page features a large header with the journal title "Etikonomi" and subtitle "Jurnal Ekonomi". The navigation bar is similar to the login page but includes a "USER HOME" link. The main content area is titled "ACTIVE SUBMISSIONS" and shows the user is logged in as "jjuhardi\_1959". There are tabs for "ACTIVE" and "ARCHIVE". Below the tabs is a table of active submissions:

ID	MM-DD SUBMIT	SEC	AUTHORS	TITLE	STATUS
31264	02-25	ART	Rosyadi, Wijayanti, Jjuhardi	A CAUSALITY IN "DEMOGRAPHIC WINTER": DOES IT ALSO HAVE AN...	Awaiting assignment

At the bottom of the table, it indicates "1 - 1 of 1 Items". The right sidebar contains the same "Focus and Scope" menu as the login page. Below it is an "AUTHOR" section with a "Submissions" link.

The screenshot shows the 'SUMMARY' page for submission #31264. The breadcrumb trail is 'Home > User > Author > Submissions > #31264 > Summary'. The page features a navigation menu at the top with options like HOME, ABOUT, USER HOME, CATEGORIES, SEARCH, CURRENT, ARCHIVES, ANNOUNCEMENTS, PUBLICATION ETHICS, AUTHOR GUIDELINES, and REVIEWERS. On the left, a 'USER' sidebar indicates the user is logged in as 'juhardi\_1959' and provides links for 'My Journals', 'My Profile', and 'Log Out'. The main content area is divided into three sections: 'SUBMISSION', 'STATUS', and 'SUBMISSION METADATA'. The 'SUBMISSION' section lists authors (Rosyadi Rosyadi, Tri Cicik Wijayanti, Juhardi Juhardi), title ('A Causality in "Demographic Winter": Does It Also Have an Impact on Indonesia? – Population Economic Records'), original file (31264-94528-1-SM.DOCX), and submitter (Assoc. Prof. Dr. Juhardi Juhardi). The 'STATUS' section shows the submission is 'Awaiting assignment', initiated on 2023-02-25, and last modified on 2023-02-25. The 'SUBMISSION METADATA' section includes an 'EDIT METADATA' link. On the right, a vertical menu contains 'Focus and Scope', 'Peer Review Process', 'Editorial Team', 'Contact', and 'Indexing & Abstracting'. Below this is an 'AUTHOR' section with 'Submissions' (Active: 1, Archive: 0, New Submission) and a 'JOURNAL CONTENT' search box with a search scope dropdown set to 'All'.

The screenshot shows the 'REVIEW' page for submission #31264. The breadcrumb trail is 'Home > User > Author > Submissions > #31264 > Review'. The layout is similar to the summary page. The 'SUBMISSION' section lists the same authors and title, but the editor is 'Faizul Mubarak'. The 'PEER REVIEW' section shows 'ROUND 1' with a review version (31264-94529-1-RV.DOCX) initiated on 2023-02-25. The 'EDITOR DECISION' section shows a decision of '—', a 'Notify Editor' button, and an 'Editor/Autor Email Record' with 'No Comments'. At the bottom, there is an 'Upload Author Version' section with a 'Pilih File' button, a text field containing 'Tidak ada file yang dipilih', and an 'Upload' button. The right sidebar is identical to the summary page, including the 'AUTHOR' section and 'JOURNAL CONTENT' search box.

## #31264 Summary

Summary | Review | Editing

### Submission

Authors	Rosyadi Rosyadi, Tri Cicik Wijayanti, Jiuhardi Jiuhardi
Title	A Causality in "Demographic Winter": Does it Also Have an Impact on Indonesia? - Population Economic Records
Original file	31264-94528-1-SM.docx 2023-02-25
Supp. files	None <a href="#">Add a Supplementary File</a>
Submitter	Assoc. Prof. Dr. Jiuhardi Jiuhardi
Date submitted	February 25, 2023 - 10:30 AM
Section	Articles
Editor	Faizul Mubarak

### Status

Status	In Review
Initiated	2023-02-25
Last modified	2023-04-26

### Submission Metadata

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Search in mail

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[ETK] Editor Decision External Inbox x

Mohammad Nur Rianto Al Arif <journal@uinjkt.ac.id>  
to me, Rosyadi, Tri

Assoc. Prof. Dr. Jiuhardi Jiuhardi:

We have reached a decision regarding your submission to ETIKONOMI, "A Causality in "Demographic Winter": Does it Also Have an Impact on Indonesia? - Population Economic Records".

Our decision is Major Revision. Please do your revision in a month for the further review of your manuscript. We also strongly recommended authors use proofread for the English editing.

Thank you very much for your attention & cooperation.

Regards,

Mohammad Nur Rianto Al Arif  
Universitas Islam Negeri (UIN) Syarif Hidayatullah Jakarta (Scopus ID: 57200389941/ Orcid ID: 0000-0002-5731-1411)  
[mnur.rianto@uinjkt.ac.id](mailto:mnur.rianto@uinjkt.ac.id)

ETIKONOMI

journal.uinjkt.ac.id/index.php/etikonomi/author/submissionReview/31264

### Submission

Authors	Rosyadi Rosyadi, Tri Cicik Wijayanti, Jiuhardi Jiuhardi
Title	A Causality in "Demographic Winter": Does it Also Have an Impact on Indonesia? - Population Economic Records
Section	Articles
Editor	Faizul Mubarak

### Peer Review

#### Round 1

Review Version	31264-94529-1-RV.docx 2023-02-25
Initiated	2023-04-26
Last modified	2023-07-08
Uploaded file	Reviewer B 31264-101346-1-RV.pdf 2023-07-08 Reviewer A 31264-101345-1-RV.pdf 2023-07-08

### Editor Decision

Decision	Resubmit for Review 2023-07-08
Notify Editor	Editor/Author Email Record 2023-07-08
Editor Version	None
Author Version	31264-101426-1-ED.docx 2023-07-10 Delete
Upload Author Version	<input type="button" value="Pilih File"/> Tidak ada file yang dipilih

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Home / User / Author / Active Submissions

### Active Submissions

ID	Submit Sec	Authors	Title	Status
3126402-25	ART	Rosyadi, Wijayanti, Jiuhardi	A Causality in "Demographic Winter": Does it Also Have an...	In Review Round 2

1 - 1 of 1 Items

### Start a New Submission

[Click here](#) to go to step one of the five-step submission process.

### Refbacs

Date	Added	Hits URL	Article	Title	Status	Action
There are currently no refbacs.						

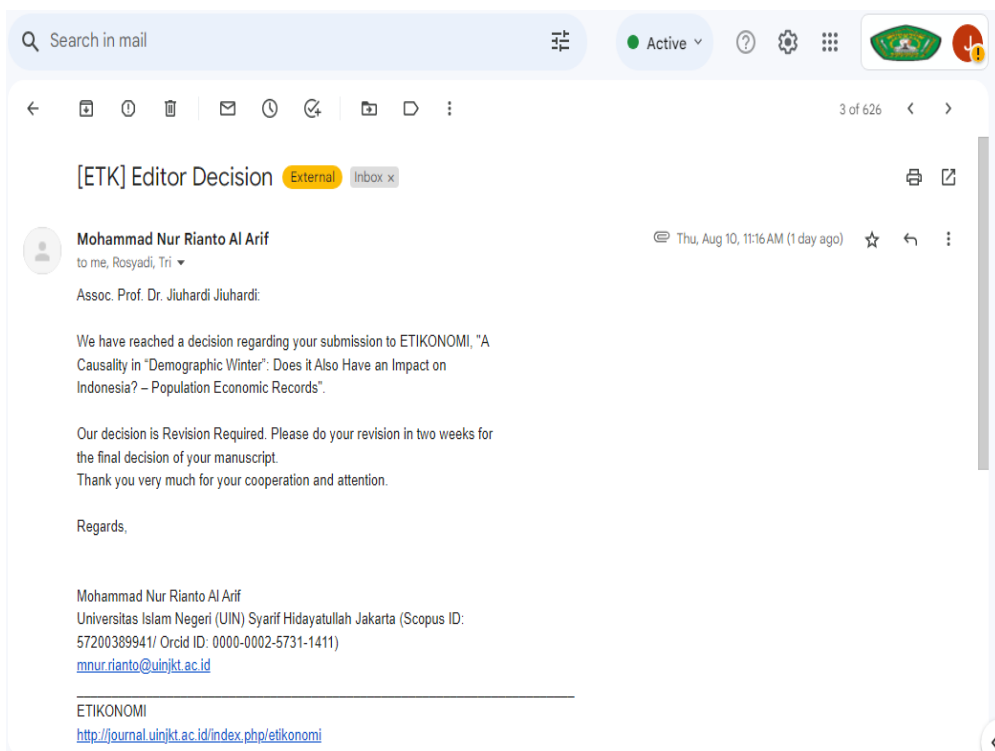
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**Rosyadi, Wijayanti, Juhardi**  
**A Causality in "Demographic Winter": Does it Have an Impact...**



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### Peer Review

#### Round 1

Review Version	31264-94529-1-RV.docx	2023-02-25
Initiated	2023-04-26	
Last modified	2023-07-08	
Uploaded file	Reviewer B 31264-101346-1-RV.pdf	2023-07-08
	Reviewer A 31264-101345-1-RV.pdf	2023-07-08
Editor Version	None	
Author Version	31264-101426-1-ED.docx	2023-07-10

#### Round 2

Review Version	31264-94529-2-RV.docx	2023-07-11
Initiated	2023-07-11	
Last modified	2023-08-10	
Uploaded file	Reviewer B 31264-103147-1-RV.pdf	2023-08-10
	Reviewer A 31264-103146-1-RV.pdf	2023-08-10

### Editor Decision

Decision	Revisions Required	2023-08-10
Notify Editor	<input checked="" type="checkbox"/> Editor/Author Email Record	2023-08-10
Editor Version	None	
Author Version	31264-101426-2-ED.docx	2023-08-12 <a href="#">Delete</a>
Upload Author Version	<input type="button" value="Pilih File"/> Tidak ada file yang dipilih	<input type="button" value="Upload"/>

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	2,351		584
	2,257		580
	2,159		579

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MM-DD	ID	Submit Sec	Authors	Title	Status
	3126402-25	ART	Rosyadi, Wijayanti, Jiuhardi	A Causality in "Demographic Winter": Does it Also Have an...	In Review: Revisions Required

1 - 1 of 1 Items

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	3126402-25	ART	Rosyadi, Wijayanti, Jiuhardi	A Causality in "Demographic Winter": Does it Also Have an...	In Editing

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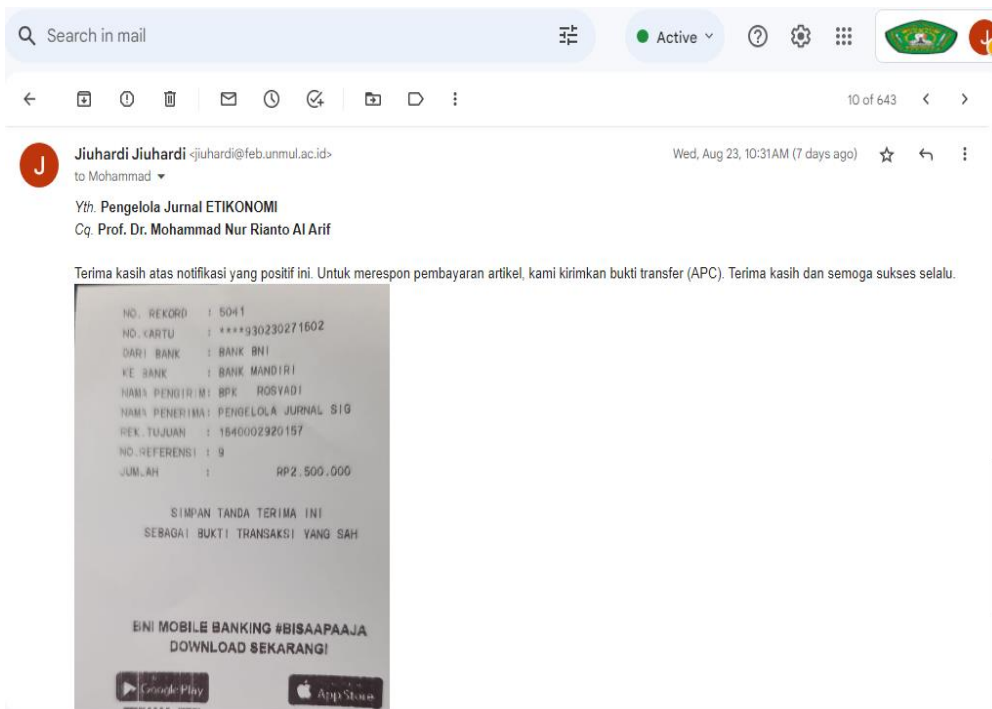
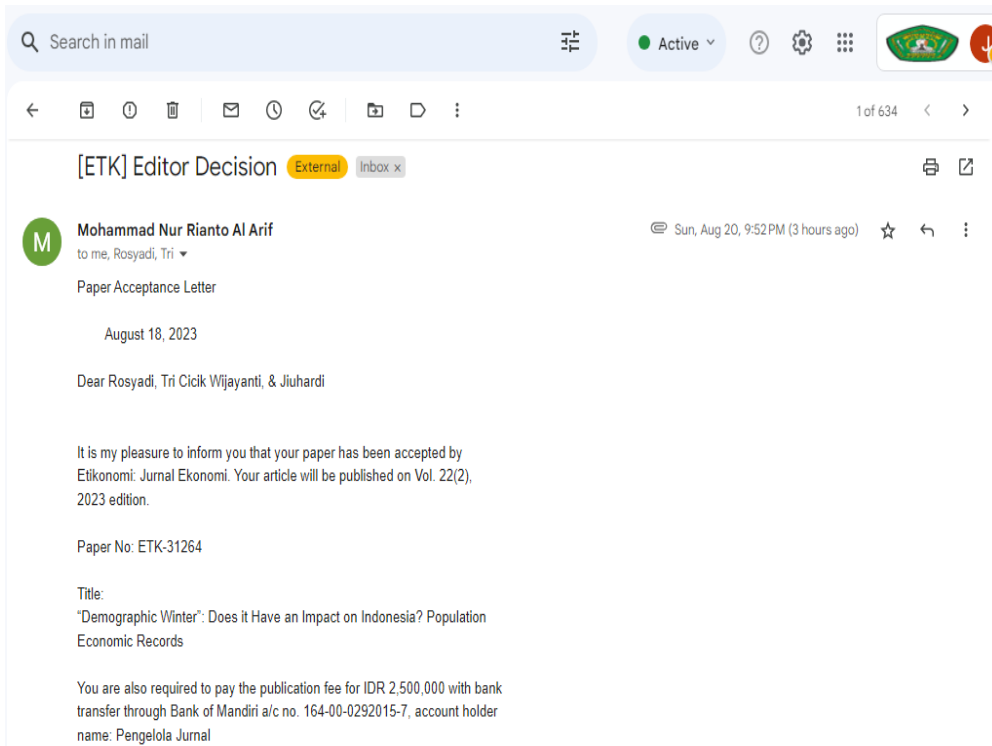
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**Rosyadi, Wijayanti, Jiuhardi**  
**A Causality in “Demographic Winter”: Does it Have an Impact...**



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<https://doi.org/10.15408/etk.v21i2.23339>

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### Archive

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ID	SubmitSec	Authors	Title	Views	Status
3126402-25	ART	Rosyadi, Wijayanti, Jiuhardi	"Demographic Winter": Does it Have an Impact on...	0	Vol 22, No 2 (2023): (Forthcoming Issue)

1 - 1 of 1 Items

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2023-10-03	1	<a href="https://www.google.com/">https://www.google.com/</a>	"Demographic Winter": Does it Have an Impact on Indonesia? Population Economic Records		New	Edit   Delete

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## "Demographic Winter": Does it Have an Impact on Indonesia? Population Economic Records

Rosyadi Rosyadi, Tri Cicik Wijayanti, Jiuhardi Jiuhardi

### Abstract

*The originality of this paper focuses on existing material. It has implications for uncovering Indonesia's barriers to population growth, which are associated with economic components such as employment, wages, and happiness. On this basis, the orientation of this study is centered on cycles in the "demographic winter" of Indonesia. Short-term data for 2016-2021 is applied. This research is using multiple regression. In its actualization, population composition has a positive effect on the aging population, the aging population has a positive effect on the young workforce, and the young workforce affects wages. Another direct effect found a positive effect between fertility on marriage and birth productivity. From other moments, it is evident that being married positively affects birth productivity, and life expectancy and birth productivity positively affect happiness. In theoretical construction, the findings suggest further identification beyond the existing premise. The research in the next edition is growing by including other non-economic factors such as health, migration, mortality, and education.*

JEL Classification: C12, C22, J10, J21, I31

### Keywords

prosperity; demographics; workforce; happiness

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Password: [masked]  
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## Paper Acceptance Letter

August 18, 2023

Dear Rosyadi, Tri Cicik Wijayanti, & Jiuhardi

It is my pleasure to inform you that your paper has been accepted by Etikonomi: Jurnal Ekonomi. Your article will be published on Vol. 22(2), 2023 edition.

Paper No: ETK-31264

Title:

**"Demographic Winter": Does it Have an Impact on Indonesia?  
Population Economic Records**

You are also required to pay the publication fee for IDR 2,500,000 with bank transfer through Bank of Mandiri a/c no. 164-00-0292015-7, account holder name: Pengelola Jurnal

Etikonomi: Jurnal Ekonomi accredited First Rank (Sinta-1 by Ministry of Education, Culture, Research and Technology Republic of Indonesia No. 158/E/KPT/2021 on December 09, 2021 (Valid until Vol. 24(2), 2025). Etikonomi: Jurnal Ekonomi indexed by Emerging Source of Citation Index (ESCI), Dimensions, CrossRef, Ebsco (Open Science Directory), IPI, ISJD LIPI, Moraref, etc.

Thank you very much for contributing to Etikonomi: Jurnal Ekonomi.

Regards,



Prof. Dr. Mohammad Nur Rianto Al Arif  
Editor in Chief Journal of Etikonomi

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Etikonomi UIN Jakarta <etikonomi@uinjkt.ac.id>  
to Etikonomi, bcc: me

Sat, Oct 7, 6:07 AM (1 day ago)

Dear Authors

Hope you are doing well!

Attached you'll find a paper for proofreading before publication. Please check the text of your article and correct mistakes (if any). Inform me if there are any corrections indicating page/line/column. Please, return proofs during the next 3 days until October 9, 2023.

*Pay your attention that proofreading includes the only changes to the title of the paper, list of authors or scientific errors will be considered and further approved by the publishing team. The publisher is not responsible for the errors which are the results of authors' oversight. We reserve the right to make the final decision regarding style and the size of figures.*

Regards,

Prof. Dr. M. Nur Rianto Al Arif  
Editor of Etikonomi

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Jurnal Etikonomi ...

Juhardi Juhardi <jjuhardi@feb.unmul.ac.id>  
to Etikonomi

Sat, Oct 7, 5:00 PM (16 hours ago)

Dear editor,

I and my colleagues have reviewed the attached clean manuscript file. In essence, there are no minor changes regarding the content. We have approved this final version. Thank you.

All the best,  
Prof. Dr. Juhardi

...

Reply Forward

**A Causality in “Demographic Winter”: Does it ~~Also~~ Have an Impact on  
Indonesia? –Population Economic Records  
<Title, Garamond 14, Not more than 14 words>**

Rosyadi Rosyadi<sup>1</sup>, Tri Cicik Wijayanti<sup>2</sup>, Jiuhardi Jiuhardi<sup>3\*</sup>  
<Authors, Garamond 12>

<sup>1</sup>Faculty of Economics and Business, Tanjungpura University, Pontianak, Indonesia

<sup>2</sup>Faculty of Economics and Business, Gajayana University, Malang, Indonesia

<sup>3</sup>Faculty of Economics and Business, Mulawarman University, Samarinda, Indonesia

<affiliations, Garamond 12>

Email: <sup>1</sup>rosyadi@ekonomi.untan.ac.id, <sup>2</sup>triticik@unigamalang.ac.id, <sup>3</sup>jiuhardi@feb.unmul.ac.id

<Email of each authors, Garamond 12>

\*Corresponding Author

JEL Classification:	<b>Abstract</b>
C12	<i>The condition that is currently viral is “demographic winter”. At the same time,</i>
C22	<i>the happiness of the population is confronted with polemics that are not only</i>
J10	<i>related to demographics, but also related to many economic and social elements.</i>
J21	<i>The originality of this paper focuses on existing material and has implications for</i>
I31	<i>uncovering the barriers to population growth in Indonesia, which are associated</i>
Received:	<i>with economic components such as employment, wages, and happiness. On this</i>
Revised:	<i>basis. The orientation of this scientific work study is to identify centered cycles</i>
Accepted:	<i>in on cycles in the “demographic winter” in from Indonesia. Short-term data for</i>
	<i>2016–2021 is applied. Data tabulation technique via multiple regression. In its</i>
	<i>actualization, population composition has a positive effect on the aging</i>
	<i>population, the aging population has a positive effect on the young workforce, and</i>
	<i>the young workforce has an effect on wages. Another direct effect found a positive</i>
	<i>effect between fertility on married and birth productivity. From other moments, it</i>
	<i>is evident that being married has a positive effect on birth productivity, and life</i>
	<i>expectancy and birth productivity have a positive effect on happiness. Creating an</i>
	<i>effective framework leads to a unified demographic concept. In theoretical</i>
	<i>construction, the findings suggest further identification beyond the existing</i>
	<i>premise. By including other non-economic factors such as health, migration,</i>
	<i>mortality, and education, the research in the next edition is growing.</i>
	<b>Keywords:</b> <del>Indonesia; multiple regression; prosperity;</del> demographics; workforce; happiness

**How to Cite:**

Gobar, R., Chang, B. H., Derindag, O. F., & Abro, Z. (2022). Nexus Between Consumption, Income, and Price Changes: Asymmetric Evidence from NARDL Model. *Etikonomi*, 21(2), xx – xx. <https://doi.org/10.15408/etk.v21i2.23339>.

**INTRODUCTION**

<https://journal.uinjkt.ac.id/index.php/etikonomi>  
<https://doi.org/10.15408/etk.v21i2.23339>

<Garamond 12>

In 2030, demographic patterns will experience new colors that cannot be separated from academic discussions and debates. Worldometers (2023) and CEOWORLD magazine (2023) report that China has the highest population in the world in 2020. In fact, 1,439,323,776 people live in China. This number accounts for 18.47% of the global population. With the average growth of China's population of 1.003%, it is believed that it will continue to decrease. At the same ~~time~~ moment, even though the population structure in India is still below that of China, where 1,380,004,385 ~~people~~ depend on the nation for their lives, the average growth of India's population (1.010%) far exceeds expectations or above ~~is~~ China's growth. This anomaly far exceeded expectations. Moreover, India contributes to 17.7% of the world's population. Surprisingly, the two websites also inform that for 2030 and 2050, the global population's habitat will experience a spectacular transition. For illustration, India's population explosion in 2030 ~~is~~ 1,503,642,322 and in 2050 ~~is~~ 1,639,176,033, while the population change from China for the periods 2030 and 2050, is calculated to be 1,503,642,322 and 1,639,176,033. Automatically, the population volume in China is projected to continue to decline. In terms of quantity, the population in India is superior to ~~that of~~ China. Although contradictory, India's overpopulation can be harnessed to enter the competitive job market. Another reality is reflected by the birth rate of 2.2 babies per household in India, which also stands out from China, which is speculated to have a birth rate of 1.7 babies in 2022.

For the case of developing markets with middle to lower affluence, take the example of the top 10 world population ~~s~~: Indonesia (1.01%), Pakistan (1.019%), Brazil (1.006%), Bangladesh (1.009%), and Mexico (1.01%), population growth has slowed down a bit. Only in Nigeria did growth experience a drastic increase of up to 1.025%. Interestingly, this is also followed by the United States (1.005%) and Russia (0.999%). In fact, as a country with a more advanced market share, the population growth of both countries has been detected to be declining.

Figure 1. Big 6 Population in Indonesia: 2016–2021, thousand

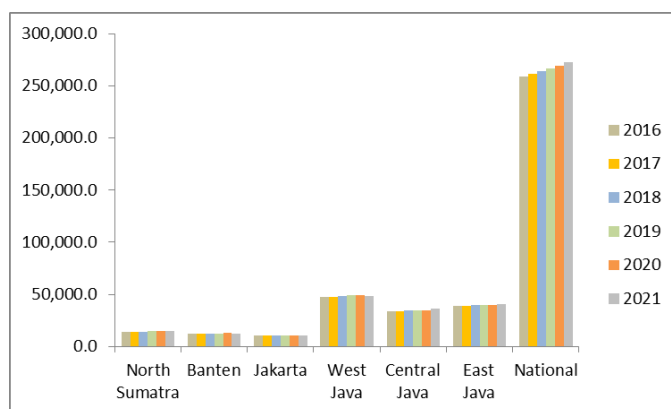


Figure 1 reflects the top ~~6~~ areas/provinces with the highest population capacity in Indonesia, including: North Sumatra, Banten, Jakarta, West Java, Central Java, and East Java (BPS-Statistics Indonesia, 2022). Throughout the ~~6~~ past six years, the national population growth

trend has been positive (1.07%). ~~From~~ domestic growth, the diagram above shows density, which is crucial. With an average population volume of 265,535.2 thousand, this has led to a slowdown in births and a shortage of labor resources. From year to year (y-o-y), especially from 2020 to 2021, the most striking performance is 1.11%. This condition was triggered by the transmission of the 2019 Coronavirus, which weakened human health, including the consequences for death (Fitriadi et al., 2022). Implicitly, the highest number and percentage of population referring to rankings is West Java: 48,522.5 thousand (18.28%), East Java: 39,738.4 (14.97%), Central Java: 34,749.1 thousand (13.09%), North Sumatra: 14,549.2 thousand (5.48%), Banten: 12,450.7 thousand (4.69%), and the Indonesian government center/Jakarta: 10,455.3 thousand (3.94%). ~~Surprisingly, s~~Since the COVID-19 era ended and returned to normal, the demographic situation in Banten has actually lost 833.8 thousand ~~population-people~~, or a reduction of 6.47% from 2020 to 2021. Related to demographic turmoil in various parts of the world, it has caused uncertainty in the human ecosystem (Myers et al., 2013; Spernovasilis et al., 2021).

The emergence of a new issue called "demographic winter" is relevant to highlight. ~~Interestingly, a~~ decade ago, the world was distorted by the topic of "over-population" (Baus, 2017; Juhardi et al., 2022; Pimentel, 2012; Van Bavel, 2013). We are aware of the demographic explosion, which is feared to disrupt the food supply and are faced with ~~2-two~~ options: death from hunger or death from satiety. Trimble (2013) defines that gender sexuality in natural families ~~as experiences-experiencing~~ a depopulation crisis. In essence, women's reproduction finds problems that can save generations in the urgency of individual marriage decisions and childbearing.

Furthermore, demographic winter is in contrast to the demographic trap, where in general the demographic trap is more towards developing nations with high birth rates, while demographic winter has entered developed countries such as in several European Unions, especially in Poland, Spain, Austria, Italy, and Germany (Dumont, 2019). In essence, this phenomenon was initiated by ~~the~~ infrequently heard crying babies, shifts in culture and traditions, ~~and~~ the reduction of young workers. The demographic winter view of population conflict instead takes practical solutions that don't think about the future through arguments about giving birth and caring for babies, ~~that-which~~ will take time. In addition, productive workers need to take care of themselves, support their families, and adjust to the work environment. They assume that the high burden on the household, the increase in the cost of giving birth and education for caring for children can threaten their position or ~~cause them to~~ lose their job. Although ~~currently~~ the government ~~currently~~ distributes subsidies for childbirth, health, ~~and~~ education ~~costs-or,~~ ~~and~~ other social security ~~costs~~, the majority of skilled workers there are more selective in terms of marriage.

The literature that examines changes in human mobility in developing countries is discussed. Lawrence et al. (2013) argue that work professionalism enlivens economic cycles. As samples in Iran, Georgia, ~~USA~~, Pakistan, and the National Longitudinal Survey of the Labor Market Experience (NLSY) ~~show~~, the dilemma is between choosing to postpone marriage to pursue a career, marry early, or commit to marrying ~~someone~~ who has the opportunity to have children (Gould, 2008; Ghazal et al., 2022; Lundberg et al., 2016; McClendon et al., 2014; Montazeri et al., 2016; Rukhadze, 2018). Normally, marital status is, in most cases, understood as the essence of forming a new generation. On the other hand, there are also marriage motives that ~~aim-dedicate~~ to lead to happiness without the need to determine, program, and plan

offspring. From a certain perspective, there are also those who set aside the level of marriage for reasons of wasting time or just getting to know a partner without ties and deliberately not having children. In the pockets of the middle class, this concept is quite popular ~~which and~~ is believed to exist amidst the tendency ~~of toward~~ prosperity. However, demographic winter elsewhere can hinder the respect, comfort, dignity, and continuity of households and household groups. As a comparison, if it is articulated in Indonesia, young talents whose marriages are late, will be contrary to religion, considered selfish, and contrary to society's point of view. ~~From-In~~ both the female and male genders, although postponing marriage can improve education, business networks, relationship connections, and personal time flexibility, it is also detrimental to mental health at peak age and vulnerable to HIV transmission (Gündoğdu, & Bulut, 2022).

Marriage or cohabitation is a holistic behavior ~~without that interfering doest not interfere~~ with the rights of every human being. ~~From-In~~ other corridors, individuals are moving to demand autonomous freedom. Conversely, the more this is treated without synergistic participation, the more human adaptation can be eliminated. A ~~holistic-universal~~ reflection to stimulate population issues, especially avoiding a narrow mindset that threatens population extinction. Besides, nominal wages depend on the labor force, where worker productivity will determine the birth rate. With an optimal fertility rate, the life expectancy of the workers is also high. Logically, if population aging occurs, it will have implications for the fertility rate of workers of a certain age, so that low birth productivity and life expectancy actually reduce happiness. Apart from per capita income, education, family harmony, assets and home environment, and security, the dimensions of human happiness that are also important are health, availability of free time, work, and social interaction. ~~Speaking of In~~ the four pillars, they are integrated with each other, relying on resource competence, peace of life, and conducive human relations.

In Cape Coast-Ghana, Amegayibor (2021) diagnoses that the performance of manufacturing companies is determined by the demographic factors of their employees, including educational level, age group, years of service, and experience. Trimble (2013) demonstrates that depopulation is considered a practical solution for "natural families" in European civilization networks. With a permanent social security system, new polemics are found, especially in fear of sexual, economic, racial, and moral chaos. Mino & Sasaki (2023) dissect the long-term consequences of population decline in Japan. With dwindling human resources, consumption and per capita income will stop at some point. Also, high-income countries, such as the USA. Jones (2022) illustrates that there is a constant population, which is reflected in the fertility rate of women, which grows stagnant, so the standard of living is not allocated optimally; it can even disappear as the world population slows down. This reason underlies Mehroolhassani et al. (2019) criticism of the decreasing rate of population growth in Iran. In the form of general fertility that has been disrupted since the last decade, Iran's population balance is classified as "small" as a result of modernization changes whose behavior does not match the gap between generations, including uneven urbanization, unemployment and weak economic participation, the age of marriage, marital pressure, uncontrolled abortion, family formation, and perceptions of the value of life. Since the last century, the USA has experienced the sharpest decline in life expectancy (Tanne, 2023). In reversing the decline in life expectancy, this cannot be separated from strengthening health insights towards disease control (Lichtenberg, 2022). Heuveline (2022) considers that the novel Corona virus disease of 2019 is

an unintended consequence of human civilization and actually adds a new death rate for middle- to upper-income earners.

Basically, the discussion about anomalies in demography in some cases raises the concerns of many parties (e.g., Bradshaw & Brook, 2014; Sadigov, 2022). Initially, in the midst of a period of war, the population was beset by the uncertainty of survival. The high death rate due to poverty, hunger, and inadequate access to health care has led to the exponential urbanization of an area. With the availability of transportation routes, water sources, soil fertility, a suitable climate, and topography with abundant nature, it is possible for migrants to settle in new areas. Along with the shift to increasingly sophisticated times, there was a population explosion. Rapid growth with limited residential space, causing an uneven population density. At the same time, many programs are designed to limit the birth rate. Besides that, lifestyle shifts have changed human character, including the age requirement for marriage. One factor determining economic welfare is the type of work. Not all jobs absorb labor or can provide sufficient wages. With high living needs, workers think twice about getting married. As a result, the productive age for building a household is missed. Some workers choose to develop their careers and spend time at work. Finally, the opportunity to have offspring was also ignored. The slowing global population cannot be separated from humanity, which is very dependent on limited resources. Wasteful consumption (e.g., energy scale) by depleting nature triggers disparities in birth rates. At their peak, low-income countries have high birth rates, while low-income countries have low birth rates (Peek, 2022).

The novelty of this research lies in the theme raised around the systematic link between demographic aspects and economic prosperity. Also, this is different from similar publications, which haven't talked much about developing markets, especially Indonesia. Speaking of "demographic winter", the majority of academic debates only addressing developed countries that are experiencing a population crisis, but not developing or underdeveloped countries. Uniquely, there is some skepticism that downsizing the population is seen as increasing productivity, but this assumption is refuted in some cases because over duration, it will actually lead to a decline in economic performance. Returning to the initial problem, the situation in Indonesia has broad market segmentation, economic potential, and workforce volume in preparation for facing broad industrial opportunities in the future but is experiencing a demographic trap that is not evenly distributed between regions. Often, Indonesia is under the radar or escapes the attention of scholars for in-depth observation. Observing this asynchronous cycle, where access to employment opportunities for the labor-intensive sector can create prosperity in an inclusive manner, the employment system, which is highly dependent on population movement, certainly cannot be ignored. Based on the above compilation of paradigms and data, it makes sense to explore the aspects that influence happiness. Completely, the idea related to population happiness in this scientific paper contains demographic, social, employment, and economic elements. The outline of the paper is organized into 4-four phases: introduction, method, results and discussion, and conclusion. -From a specific angle, some studies do not reveal non-economic aspects that can affect the demographic sphere. Speaking of the existing situation, this research is feasible to be proposed based on different parameters than the others. By combining economic and non-economic aspects, we concentrate on the potential for a demographic slowdown in Indonesia..

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## METHODS

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### Data Framework

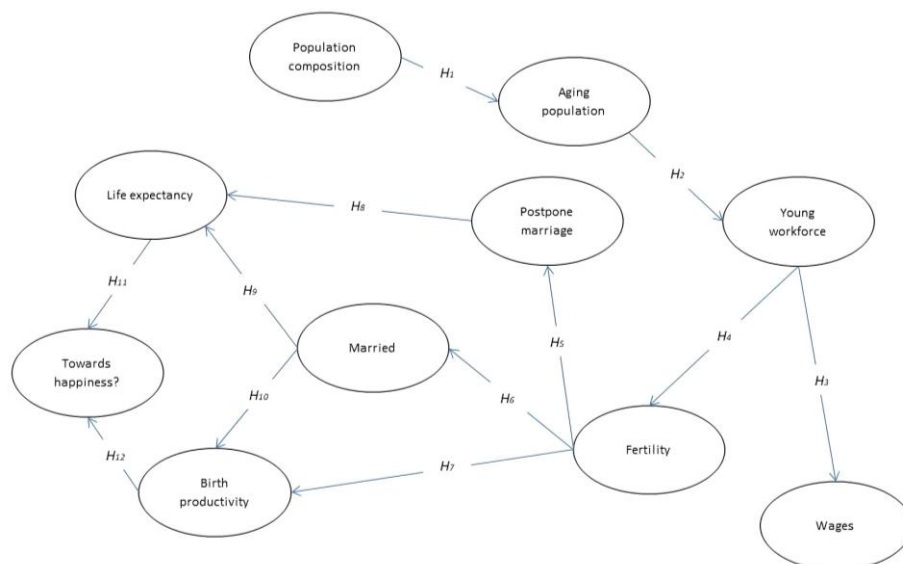
The data focuses on secondary-type data facilitated by BPS-Statistics Indonesia. Economic and social data related to population ~~as are~~ the main part. Data priority starts ~~from in~~ 2016 ~~to an ends in~~ 2021. With a frequency of ~~6 six~~ periods and ~~40 ten~~ key variables, the observations are 60 samples. Objectivity at the domestic level (Indonesia). Data collected from annual documents is created using an econometric approach.

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### Variable Attributes

Variables are modified into two formats: dependent variables and independent variables. Variables consist of population composition (PC), aging population (AP), young workforce (YW), wages (Wgs), fertility (Fty), postponed marriage (PM), married (Mrd), birth productivity (BP), life expectancy (LE), and happiness (Hps). In the context of data, study variables have varied units. Population composition is based on ratio, while the aging population, young workforce, fertility, and birth productivity have the same criteria, i.e., people. Operationally, wages are adjusted to nominal IDR, married and postponed marriages are described by percentage, life expectancy is measured by years, and happiness is measured via index. In relation, only PC and HP act constantly. Definitely, PC functions as a "pure independent" that starts the initial hypothesis. Then, Hps is categorized as a "pure dependent" which is designed into the final model. From the relationship arrow, the use of PC is concerned with influencing the dependent variable, while Hps is addressed as the ultimate goal of being influenced by the independent variable. The other eight variables (AP, YW, Wgs, Fty, PM, Mrd, BP, and LE) are bidirectional, indicating that they are clustered into dependent and independent variables. In principle, Figure 2 represents the variable package.

Figure 2. Conceptual Foundation





Each variable has different characteristics, so 12 hypotheses are formulated as above. Technically, only population composition is instructed as a pure independent variable and the other 9-nine variables are converted into a unidirectional relationship. These dimensions include: aging population, young workforce, wages, fertility, postponed marriage, married, birth productivity, life expectancy, and happiness. The connotation of the cross-variables is summarized in Table 1.

**Table 1. Hypothesis Instruments and Assumptions**

Code/label of variables	Measurement	Scenario
PC	The sex ratio of the population between the male and female genders	
AP	The “generation X” pyramid/population hierarchy aged 45–75+	+/-
YW	Workers classified as “generation Y (millennial) and Gen. Z (i Generation)” aged 15–44	+/-
Wgs	Nominal average provincial minimum wage (UMP)	+/-
Fty	Fertility rate per woman	+/-
PM	Proportion of population with single status	+/-
Mrd	Proportion of population with married/living partner status	+/-
BP	Live birth per 1,000 population	+/-
LE	The life expectancy of the population	+/-
Hps	Population happiness index on a scale of 0–10	+/-

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### Modeling

The data was operated via SPSS version 25. After the data was processed, the material for analysis was set using multiple time-series regression. There are 4-four systematics in regression: descriptive statistics, correlation (R), determination (R<sup>2</sup>), and partial effects (t-statistics and probability). Descriptive statistics detect values at the mean–maximum–minimum–standard deviation (Std. Dev./S.D), R<sup>2</sup> shows the direction or strength of the variable relationship, and a partial test ~~to~~ confirm the partial association. The first, second, third, and fourth formulations are arranged below:

$$\begin{aligned}
 AP &= \Delta\delta_1 + \beta_{PC} + \varepsilon_1 \\
 YW &= \Delta\delta_2 + \beta_{AP} + \varepsilon_2 \\
 Wgs &= \Delta\delta_3 + \beta_{YW} + \varepsilon_3 \\
 Fty &= \Delta\delta_4 + \beta_{YW} + \varepsilon_4
 \end{aligned}$$

In the fifth, sixth, and seventh formulations the following is written:

$$\begin{aligned}
 PM &= \Delta\delta_5 + \beta_{Fty} + \varepsilon_5 \\
 Mrd &= \Delta\delta_6 + \beta_{Fty} + \varepsilon_6 \\
 BP &= \Delta\delta_7 + \beta_{Fty} + \varepsilon_7
 \end{aligned}$$

Then, the eighth and nine equations are developed as follows:

$$\begin{aligned}
 LE &= \Delta\delta_8 + \beta_{PM} + \beta_{Mrd} + \varepsilon_8 \\
 BP &= \Delta\delta_9 + \beta_{Mrd} + \varepsilon_9
 \end{aligned}$$

For the tenth ~~function~~formula, the math function is:

$$Hps = \Delta\delta_{10} + \beta_{LE} + \beta_{BP} + \varepsilon_{10}$$

Symbol notation:  $\Delta\delta$  is delta/scalar,  $\beta$  is the beta coefficient, and  $\varepsilon$  is residue.

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## RESULT AND DISCUSSIONS

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Table 2 verifies the 4 points on various descriptive statistics (SD, mean, maximum, and minimum). In practice, the score obtained from 10 variables is broken down from the highest to the smallest. The first discusses SD, the largest score for the AP variable ( $S.D = 4,013,364.58$ ) and the lowest for the Hps variable ( $S.D = 0.09$ ). Both tell the mean, ~~with~~ the largest score for the YW variable ( $mean = 80,011,461.33$ ) and the lowest on the Fty variable ( $mean = 2.24$ ). The third studied the maximum, ~~with~~ the highest score for the YW variable ( $max. = 81,589,206$ ) and the lowest for the Fty variable ( $max. = 2.31$ ). The four display the minimum, the greatest score for the YW variable ( $min. = 77,048,727$ ) and the lowest for the Fty variable ( $min. = 2.19$ ). Descriptive statistics aim to ~~understand and~~ describe the features of a particular data set by providing a brief summary of the data and sample size.

**Table 2. Result of Descriptive Statistics**

Items	Std. Dev.	Mean	Maximum	Minimum
PC	.65	101.5	102.3	100.9
AP	4,013,364.58	70,656,983.33	76,198,300	65,659,400
YW	1,814,342.37	80,011,461.33	81,589,206	77,048,727
Wgs	2,828,860.41	2,370,884.17	2,687,724	1,997,819
Fty	.41	2.24	2.31	2.19
PM	2.72	34.94	37.85	32.2
Mrd	2.72	65.06	67.8	62.15
BP	.46	17.27	18	16.7
LE	.25	71.26	71.57	70.9
Hps	.09	5.24	5.35	5.09
Sample	60	60	60	60

Furthermore, the correlation coefficient tests the closeness of the relationship between two or more variables, which is interpreted with the R value. In the SPSS output, a correlation matrix is applied (see Table 3). In practice, the performance of variables that rely on a significance degree of 99% ( $p < 0.01$ ) proves that if there is a reciprocal probability of AP with WGs and LE ( $p = 0.000$ ), YW with Fty ( $p = 0.003$ ) and BP ( $p = 0.005$ ), Wgs with LE ( $p = 0.000$ ), Fty with BP ( $p = 0.001$ ), and PM with Mrd ( $p = 0.000$ ). Among these linkages, the most impressive is the variable PM to Mrd and vice versa. Correlation performance between variables through a significance scheme of 95% ( $p < 0.05$ ) indicates that there is a collective association of AP with PM ( $p = 0.019$ ) and Mrd ( $p = 0.018$ ), Wgs with PM ( $p = 0.018$ ) and Mrd ( $p = 0.017$ ), as well as PM and Mrd to LE ( $p = 0.025$ ;  $p = 0.023$ ). The most progressive 5% correlation finding is Wgs the Mrd and vice versa.

**Table 3. Result of Correlation Estimation**

Items	PC	AP	YW	Wgs	Fty	PM	Mrd	BP	LE	Hps
PC	1	.700 (.121)	.110 (.836)	.717 (.109)	-.310 (.549)	.586 (.222)	-.590 (.218)	-.360 (.484)	.698 (.123)	.525 (.285)
AP	.700 (.121)	1	.543 (.265)	.983** (.000)	-.588 (.220)	.885* (.019)	-.890* (.018)	-.706 (.117)	.995** (.000)	.009 (.986)
YW	.110 (.836)	.543 (.265)	1	.634 (.176)	-.959** (.003)	.403 (.429)	-.404 (.427)	-.942** (.005)	.613 (.196)	-.389 (.446)
Wgs	.717 (.109)	.983** (.000)	.634 (.176)	1	-.705 (.117)	.887* (.018)	-.891* (.017)	-.805 (.054)	.993** (.000)	.072 (.892)
Fty	-.310 (.549)	-.588 (.220)	-.959** (.003)	-.705 (.117)	1	-.488 (.326)	.487 (.327)	.980** (.001)	-.659 (.155)	.121 (.820)
PM	.586 (.222)	.885* (.019)	.403 (.429)	.887* (.018)	-.488 (.326)	1	1.000** (.000)	-.642 (.169)	.868* (.025)	.280 (.591)
Mrd	-.590 (.218)	-.890* (.018)	-.404 (.427)	-.891* (.017)	.487 (.327)	1.000** (.000)	1	.642 (.169)	-.873* (.023)	-.273 (.600)
BP	-.360 (.484)	-.706 (.117)	-.942** (.005)	-.805 (.054)	.980** (.001)	-.642 (.169)	.642 (.169)	1	-.764 (.077)	.095 (.857)
LE	.698 (.123)	.995** (.000)	.613 (.196)	.993** (.000)	.659 (.155)	.868* (.025)	-.873* (.023)	-.764 (.077)	1	-.010 (.985)
Hps	.525 (.285)	.009 (.986)	-.389 (.446)	.072 (.892)	.121 (.155)	.280 (.591)	-.273 (.600)	.095 (.857)	-.010 (.985)	1
Sample	60	60	60	60	60	60	60	60	60	60

Note: \*\*) 1% probability, \*) 5% probability.

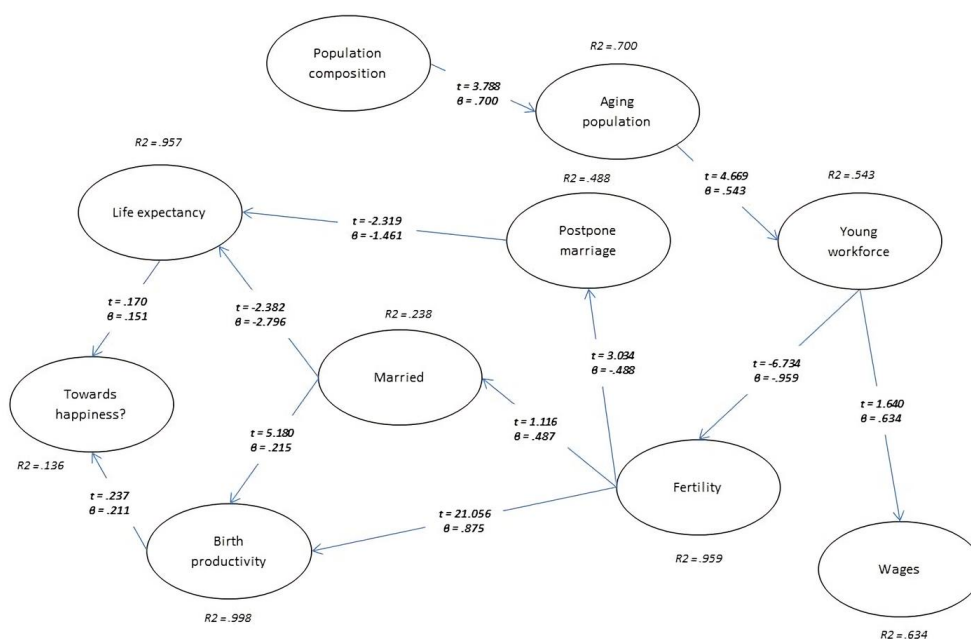
Multiple regression displays the unidirectional strength of determination and the significance of all relationships through a probability degree of 5% ( $p < 0.05$ ). R squared ( $R^2$ ) or the coefficient of determination, represents a statistical parameter that measures the difference in one variable and is adjusted in the second variable when calculating an investigation. The most prime or nearly perfect determination model is fertility and married to birth productivity ( $R^2 = 99.8\%$ ). Only 0.2% was a confounding factor outside the regression. On the one hand, the weakest determinant model is the link between life expectancy and productivity on happiness ( $R^2 = 13.6\%$ ), where 86.4% is an off-track confounding factor. The regression results stated that sub-1: PC to AP ( $t = 3.788$ ;  $\beta = 0.700$ ), sub-2: AP to YW ( $t = 4.699$ ;  $\beta = 0.543$ ), sub-3: YW to Wgs ( $t = 1.640$ ;  $\beta = 0.634$ ), sub-4: YW to Fty ( $t = -6.734$ ;  $\beta = -0.959$ ), sub-5: Fty to PM ( $t = 3.034$ ;  $\beta = -0.488$ ), sub-6: Fty to Mrd ( $t = 1.116$ ;  $\beta = 0.487$ ), sub-7: Fty and Mrd to BP ( $t = 21.056$ ;  $\beta = 0.875$  and  $t = 5.180$ ;  $\beta = 0.215$ ), sub-8: PM and Mrd to LE ( $t = -2.139$ ;  $\beta = -1.461$  and  $t = -2.382$ ;  $\beta = -2.796$ ), and sub-9: LE and BP to Hps ( $t = 0.170$ ;  $\beta = 0.151$  and  $t = 0.237$ ;  $\beta = 0.211$ ).

Figure 3 below dedicates-displays that PC has a positive impact on AP and AP also has a positive impact on YW. Then, YW has a positive impact on Wgs, but YW has a negative impact on Fty. The Fty variable has a negative impact on PM, but it has a positive impact on Mrd and BP. PM and Mrd have-has a negative impact on LE and Mrd have a positive impact on BP. The empirical output also conducts a positive relationship between LE and BP on Hps. In other words, hypotheses 1, 2, 3, 6, 7, 10, 11, and 12 are accepted. Meanwhile, 4, 5, 8, and 9 were rejected. From the existing findings, the population composition is driving the aging population by 70%. The improving aging population increases 54.3% of the young workforce. Followed by an increase in the young workforce, it also stimulated wages to reach 63.4%, but not to fertility, which decreased to 95.9%. Fertility, which is not ideal, actually reduces postpone marriage by 48.8%. However, with good fertility, it can increase married (48.7%) and birth productivity (87.5%). The impact of postponing marriage and being married, which were unstable for several periods, actually reduced life expectancy by 146.1% and 279.6%, respectively. The good news is that when married grow positively, can increase birth productivity by 21.5%. With life

expectancy and birth productivity that exceed expectations, consistently towards integrated happiness of 15.1% and 21.1%.

Nowadays, some literature links sustainable development to determining human quality (Dewanty & Isbanah, 2018; Harris & McDade, 2018; Huggins et al., 2018; Osher et al., 2020; Ristea, 2013; Short & Mollborn, 2015). In macroeconomic literacy, there is a transition in lifestyle that enables and drives personal behavior to take the choice of whether the individual is active as a subject that encourages better welfare improvements or becomes an object. In everyday life, with economic pressures, family demands, workloads, and widening social inequality, this increasingly triggers discriminatory actions. Substantively, the root of the challenge so far is that labor productivity is only measured by career brilliance without considering other factors. In this era of disruption, handling in the formation of productive humans is considered adaptive. This starts with cross-professions in several commodities (e.g., administration, bureaucracy, and other service areas in offices), which provide opportunities for employees to develop creativity, work from home with technological devices, and learn about a wider network. In a more proportional mechanism, as long as this does not conflict with privacy and household matters, the organization will not be harmed.

Figure 3. Evaluation on Regression



Mao & Zhou (1988), Olshansky (1997), and Wang et al. (2022) commented that the age structure of the population is not only influenced by marriage, immigration, death, and birth, but also changes from a micro perspective, such as family factors. The older the age structure, the smaller the family size and vice versa. There is a significant gap imbalance between urban and rural populations. It is characterized as the nuclear family caused by the dynamics convergence of industrialization in increasing economic development, thus causing an aging population. Internal

age also influences family structure and size. For example, in Beijing-China, the adult population is more dominantly influenced by economic-social measures, marriage, and birth. So, the younger residents still live with their parents. Families formed at that age have a positive effect on fertility and those who are getting older facing loneliness. Overall, in China, those who are turning independent are not a burden on the family; but an aging society is actually putting economic pressure on the contemporary term. In particular, the evolution of population aging affects spatial design. The Chinese population living in the western and central regions is relatively small compared to those living on the east coast. There is a severe polarization in the aging population and the resulting inequality in competitiveness. Trends in population aging are also influenced by and affect the social and physical environment in which they live.

This scientific work highlights the effect of the aging population on the young workforce. Comparatively, in the United States, Korea, Taiwan, and the European Union, it is detected that the older generation spends more time at work than their younger counterparts (Barakovic Husic et al., 2020; Huang et al., 2019; Lee et al., 2021; White et al., 2018). This fact also occurs worldwide, ~~whose and its~~ consequences are related to the widespread prevalence and aging demographics of the workforce. ~~Surprisingly, older-Older~~ workers tend to delay retirement and extend work contracts on the grounds of securing financial stability. This disparity may raise concerns that an increase in the employment of older people in the labor market will actually lead to unemployment for young people. Based on the gender of various occupations, educational certificates, and ~~industryindustries~~, older female workers relatively complement younger female workers, but older workers actually exclude younger workers. This has become an international concern, ~~where as~~ the elderly are expected to become an increasingly aging population and affect work productivity. The accumulation of active worker resources coupled with aging trends is urging the workplace to balance personal life and job retention.

Reviews of the young workforce on wage rates are discussed in members of the European Union, the United States, and Japan (Eichhorst et al., 2014; Kondo, 2016; Ouimet & Zarutskie, 2014). In large-scale companies, on average, they choose young employees to be paid less, but young employees who work in small companies are actually paid higher wages. The consideration is that they show much greater passion for work, innovation, and skill for the survival of the company. Work professionalism does not emphasize the employment situation of older workers with those who are young, but ~~it can encourage~~ ~~the~~ mobility of ideas, provide added value, and exchange experiences. Since the “baby boomers” reached the greatest working age, some places have reduced the number of part-time workers and cut the wages of older workers.

The cause of fertility also depends on the activities of young workers in the workplace. In the long term, the repercussions can ~~target affect~~ the decision to marry or delay marriage. ~~A High high~~ fertility rate is one of the alternatives to ~~increase-increasing~~ birth productivity. In Sweden, England, Ukraine, Switzerland, Spain, Slovenia, Slovakia, Portugal, Poland, Norway, Netherlands, Ireland, Hungary, Greece, Germany, France, Finland, Estonia, Denmark, Czech Republic, Belgium, and Austria, life plans are confronted by birth delays. Interactivity between partners with increasing age has an important effect on the success of conception. Working ~~duration for a long time~~ can ensure reproductive success. Yet, job uncertainty also channels fertility intentions. When welfare is low, the level of life satisfaction is under pressure. The certainty of individual work; ~~causes-providing~~ a situation of ~~providing~~-measurable welfare, prestige, life balance, and fertility. Subjectively, younger individuals with insecure occupations

have consequences for household affluence; but help fertility preferences. This is in line with the paper highlighted by Delbaere et al. (2020) and Vignoli et al. (2020).

What is experienced in many countries; is also seen in Indonesia. Whether it's married or unmarried status can reduce life expectancy. Various cases in Denmark, Switzerland, and the United States were exposed. Compton & Pollak (2021), Drefahl (2012), Felder (2006), Jia & Lubetkin (2020), and Kaplan & Kronick (2006) ~~assess-evaluated~~ that when people live with a partner with a legal or not-~~married~~ status, it ~~is~~-does not necessarily represent social reality. Broadly speaking, early death was found to be highest for people living together without marriage and followed by those who are married. Life span in young and older couples provides a complex analogy for survival that combines behavior during marriage with education, ~~trust~~, age, and ethnicity. Dramatically, the gap between couples and singles is leading to longevity in reference to gender. The small~~ness~~ or longevity of the spouses is elaborated by altruism, wealth, and utilitarianism. ~~Controlling the~~The mortality rate of people living with their partners and who are married ~~are~~-is positively higher than ~~that of~~ those who have never been married. The relationship between life expectancy and marital status and vice versa involves assumptions that ~~allow-limit~~ the ~~limitation of~~ basic activities of older people compared to younger people.

The fundamental difference lies only in binding regulations. If a couple wants to have children, they are required to marry formally. Whether in the future the regeneration will be a biological child or an adopted child is another matter. There must be a legal bond; ~~which-that~~ does not recognize "married by accident" and does not ~~know-understand~~ living together without being married. That way, the obligation to marry for couples is free from religious orders that have been believed from generation to generation. In contrast to Indonesia, in the United States, delaying marriage for women and men does not have a significant impact on births, except for cases of early marriage (Loughran & Zissimopoulos, 2009). Differences in specialization of marital status comprehensively determine birth rates (Killewald & Gough, 2013). Foreman-Peck (2011) explains that the household economy contributes to the fertility quality of Western Europeans. According to Parsons et al. (2015), marriage at a certain age with a low level of thinking maturity and education also contributes to the risk of early death, poverty, malnutrition, loss of income, and weak control over child growth. Changing decisions in domestic marriages can endanger births, make it more difficult for children's health, and complicate parenting and child education.

Lastly, ~~there~~ is the connection between life expectancy and birth productivity on happiness. Research from Chirinda & Phaswana-Mafuya (2019), Gimenez et al. (2021), Heydari (2017), Lawrence et al. (2015), and Lozano & Solé-Auró (2021) reveals that life expectancy positively drives happiness in South Africa, Mazandaran-Iran, Chilean senior citizens, United States adults, and working-~~aged~~ Europeans. Inferentially, the happiness of the population in several developed countries, such as the Organisation for Economic Co-operation and Development (OECD), is also determined by the consistency of the birth rate (Bellet et al., 2019; García-Buades et al., 2019; Glass et al., 2016; Isham et al., 2021; Lyubomirsky et al., 2005; Oswald et al., 2015; Robertson & Cooper, 2011; Sonfield et al., 2013). Recognizing Indonesia's "demographic bonus" with its multicultural traditions sparked concerns about social disparities at the regional level. Exploring this dynamic, layers of the population are also related to employment affairs, female fertility rates, and life expectancy. From a more reasonable viewpoint, Cheung & Leung (2011) and Leyk (2019) claim that heterogeneous urban communities tend to be different from rural communities, where the majority are homogeneous.

Following up on the negative response between the young workforce towards fertility, then fertility on postpone marriage, and married and postpone marriage towards life expectancy, implying a signal regarding weak population policy governance. This study is by previous predictions that analyze the two-way relationship between young workers, fertility, the decision to marry, and life expectancy (Ahn et al., 2021; Chari et al., 2017; Ng & Wang, 2020; Shreffler & Johnson, 2013; Yang et al., 2022). From existing papers, the underlying cause of the four discussions is inequality in work-life balance (WLB). For the sake of prospects for prosperity, career women in the USA who help the family economy often postpone births, so that fertility intentions are moderated by the high intensity of working hours. Among Korean women, long working hours have an impact on infertility. The risk of infertility is adjusted for a subgroup of young workers with irrational work schedules. In parallel, the universal marriage norm for Chinese women is being transformed from a high fertility contribution to a low fertility one. Since the 1980s, delays in marriage have been significantly correlated with reduced fertility rates. Today, like men, women in Taiwan and South Korea prefer careers and are committed to work, so they delay marrying and raising children. Child welfare in India has been shown to be affected by health and education allocations, including the mechanism for determining the age of marriage.

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## **CONCLUSION**

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The condition that is currently viral is “demographic winter”. At the same time, the happiness of the population is confronted with polemics that are not only related to demographics but also related to many economic and social elements. This The target of this scientific work is committed to testing/assessing the effect of "demographic winter". Indonesia was chosen as a study. In the last 6-six periods, positive causality has occurred from population composition to aging population, aging population to young workforce, young workforce to wages, fertility to married and birth productivity, married to birth productivity, as well as life expectancy and birth productivity to happiness. Interestingly/Additionally, negative causality is also seen between the young workforce on fertility, fertility on postpone marriage, then married and postpone marriage on life expectancy.

This paper notes the abnormal situation in demographic development in Indonesia, with the main cause being population aging. There is an inverted population age hierarchy where the older population outnumbers the young population, affecting the workforce. Young workers tend to be more selective about the type of work they do. As a result, many of them are not absorbed into several jobs. In addition, the high pressure of life encourages the existing workforce to prioritize busy work. Another justification explains that productive workers with low fertility rates tend to choose to delay marriage. Apart from that, both the decision to marry and postpone marriage also reduce life expectancy. Referring to the demonstration above, the findings recommend regulations related to health and education allocation. Under a more detailed lens, proposals for an integrated labor policy revitalization can be temporarily simulated.

All human existence is inseparable from demographic phenomena. Substantially, obedience to work has taken root, become civilized, and is a culture that cannot be separated. For this reason, the policy authorities need to inspect, protect, and execute technocratic steps that maneuver in the management of public population services. This includes institutional strengthening, such as partnering with associations and communities to popularize sustainable

family planning programs. Practical policies must lead to precise strategies to find solutions to population stratification, especially the aging of generations. Naturally, the level of fertility and birth productivity is still a matter of controversy in Indonesia, requiring government intervention. Thus, stakeholders also educate and bridging the role of regulators in solving this problem. Literally, it's not the end of the world to design ever-increasing human development projects. This paper also inspires changes in people's lifestyles that are increasingly modern in adjusting demographic mindsets, behavior in choosing a life partner, work commitments, insight into birth, and knowledge about happiness. Academic implications for future research directions may consider other indicators of the “demographic winter”.

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