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THE EFFECT OF GENDER INEQUALITY AND INCOME INEQUALITY ON COUNTRIES' EXPECTED LENGTH OF SCHOOLING: A PANEL DATA ANALYSIS EXAMPLE

O EFEITO DA DESIGUALDADE DE GÊNERO E DA DESGUALDADE DE RENDA NA DURAÇÃO PREVISTA DA ESCOLARIDADE DOS PAÍSES: UM EXEMPLO DE ANÁLISE DE DADOS EM PAINEL

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Abstract
This study examines the effect of income inequality and gender inequality on expected length of schooling. The working group consists of countries with the highest and lowest human development scores in the Human Development Index. According to the reverse sampling technique, the top 14 countries with the highest scores and the bottom 14 countries with the lowest scores on the Human Development Index were selected. Panel data on the expected length of schooling, income inequality, and gender inequality in these countries between 1990 and 2023 were analyzed using the Jamovi 2.6 program. The average expected length of schooling in countries with the highest human development index is 17.3 years, while the average expected length of schooling in countries with the lowest human development index is 8.5 years. There is a significant difference between countries with high human development scores and those with low scores in terms of both income inequality and gender inequality averages. In countries with high human development scores, income inequality and gender inequality are lower. There is an inverse

Resumo
Este estudo examina o efeito da desigualdade de renda e da desigualdade de gênero na duração esperada da escolaridade. O grupo de trabalho é composto pelos países com as pontuações mais altas e mais baixas no Índice de Desenvolvimento Humano. De acordo com a técnica de amostragem reversa, foram selecionados os 14 países com as pontuações mais altas e os 14 países com as pontuações mais baixas no Índice de Desenvolvimento Humano. Os dados do painel sobre a duração prevista da escolaridade, a desigualdade de renda e a desigualdade de gênero nesses países entre 1990 e 2023 foram analisados usando o programa Jamovi 2.6. Os dados do painel sobre a duração prevista da escolaridade, a desigualdade de renda e a desigualdade de gênero nesses países entre 1990 e 2023 foram analisados usando o programa Jamovi 2.6. A duração média prevista da escolaridade nos países com o índice de desenvolvimento humano mais elevado é de 17,3 anos, enquanto a duração média prevista da escolaridade nos países com o índice de desenvolvimento humano mais baixo é de 8,5 anos. Há uma diferença

and significant relationship between expected years of schooling and income inequality and gender inequality. Gender inequality has a mediating effect between income inequality and expected length of schooling.

Keywords: Expected Years of Schooling. Income Inequality. Gender Inequality. Human Development Index.

significativa entre os países com altos índices de desenvolvimento humano e aqueles com baixos índices em termos de desigualdade de renda e desigualdade de gênero. Em países com altos índices de desenvolvimento humano, a desigualdade de renda e a desigualdade de gênero são menores. Existe uma relação inversa e significativa entre os anos de escolaridade esperados e a desigualdade de renda e de gênero. A desigualdade de gênero tem um efeito mediador entre a desigualdade de renda e a duração prevista da escolaridade.

Palavras-chave: *Anos Esperados de Escolaridade. Desigualdade de Renda. Desigualdade de Gênero. Índice de Desenvolvimento Humano.*

1 INTRODUCTION

The Human Development Index (HDI) is an indicator that measures countries' living standards and welfare levels. It was developed by the United Nations Development Program (UNDP) in 1990 and is used to assess countries' levels of social and economic development. Today, the fact that many countries are competing in terms of socio-economic development highlights the need for a situation analysis. According to the United Nations Development Program, the human development report prepared every two years facilitates the preparation of self-assessment reports on the development rankings among countries and future development strategies. Evaluating the development index on an annual basis may not provide very clear information about a country's development process, but examining its temporal change over the long term yields more consistent, clear, and meaningful results. When evaluated individually, none of the parameters such as economy, health, and education are sufficient to indicate a country's level of development. For example, although the US has the world's largest economy, it ranks low in the world in terms of per capita gross national income according to population data. While India ranks among the top countries in terms of gross domestic product, it ranks among the lowest in terms of development due to its high population density (Gümüş, 2024).

The human development index is examined based on three main parameters. The three key parameters of the development index are: average life expectancy at birth,

expected years of schooling, and per capita national income (HDI,2025). This study examined the effect of different variables on the expected duration of schooling. Chronic economic, cultural, and social problems have various effects on the expected length of schooling, and these effects are generally negative. Economic crises usually cause unemployment rates to rise and incomes to fall. Unemployment and loss of income can make it difficult for people to meet their basic needs. Cuts in public spending are making access to social services such as health and education more difficult. This situation negatively affects the improvement of people's education levels and consequently causes the human development index to decline (Çetingüç, 2024). In this context, this study examines the impact of income inequality, which is economically decisive, and gender inequality, which is culturally decisive, on expected school duration.

1.1 Income inequality

Income inequality is the unequal distribution of national income among individuals or households. When examining income inequality among individuals, it is necessary to distinguish between income, wealth, and wage inequality. Wage inequality refers to differences in the wages paid to different people. Inequality in income distribution is a problem that can lead to negative social consequences, and reducing it is among the socio-economic goals of many countries. Income inequality produces results that negatively impact the country's economic growth through political and social conflicts (Galor, 2000; Alesina & Perotti, 1996; Benabou, 1996). Income inequality is a significant factor among the sociological causes of poverty and crime. Many countries transitioning to free market economies and developing countries face high and increasing income inequality. Reducing income inequality is among the target policies of many countries. Some of the significant consequences of income inequality are as follows (Barro, 2000): Inequality can hinder growth and slow down the rise in the standard of living. Income inequality can hinder poverty reduction efforts because it has a negative impact on growth. Inequality generally weakens the democratic process. Inequality generally weakens the democratic process. In addition, income inequality contributes to the growth of gender inequality, thereby posing a risk that exacerbates gender inequality.

1.2 Gender inequality

Gender inequality dates back to periods as ancient as the existence of humankind. With the transition to settled life, the woman's role as a mother shifted from the public sphere to the social sphere, thus laying the foundation for the inequality that existed. The feudal system seen in the Middle Ages and the modern era has exacerbated the existing problem of social inequality with the rise of capitalist approaches based on class order (Arrow, etc., 2000). Gender inequality begins with the determination of an individual's gender even before birth, and this inequality persists in the home, school, and workplace (Yazıcı & Değer-Şahbaz, 2020). Gender inequality refers to situations where individuals face discrimination in employment based on their gender. This inequality is evident in many areas of society and is most clearly reflected in the distribution of income and wealth (Ataklı, 2016).

The development of gender roles is fundamentally based on patriarchal structures and the family. When men who hold decision-making power within the family begin to encroach upon the woman's sphere of responsibility and duties, it lays the foundation for gender inequality (Bingöl, 2014). Patriarchal structures are not the only cause of gender inequality. Poverty, discriminatory attitudes towards women, child marriages, low levels of education among parents, and insufficient support for girls' education can also contribute to gender inequality (Başarer-Berber, 2021). The main determinants of gender inequality include low levels of education, unfair income distribution, and cultural barriers. As a result of this inequality, women experience more problems than men in accessing education, obtaining employment, and earning an income (Atalay & Dinç, 2020). In other words, gender inequality is not biologically based, but has become a problem encountered in every area of social life, from politics to education, economics, and family life (Durgun & Gök, 2017; Savaşkan, 2019). Reflections of gender inequality can be seen in all areas of society. The state of gender inequality, which is most noticeable in education, health, employment, and politics, should be examined in detail in these areas. According to the Human Development Index, most countries in the world rank below the global average in terms of gender inequality (UNDP,2025). This situation is indeed a global problem.

1.3 Problem status

Studies on gender inequality in the literature have focused on the psychological consequences of gender inequality, the disadvantages it creates for women, its cultural and socio-economic causes, the negative economic consequences of women's low participation in the workforce, and the relationship between gender inequality and violence against women (Boyacıoğlu, 2016 ; Yavuz, 2015; Kandiyoti, 1997; Akbulut, 2022; Karaca, 2024; Gümüş, 2024; Aktaş, 2025).

Studies on income inequality in the literature examine the relationship between income inequality and poverty, the relationship between income inequality and economic growth, the relationship between income inequality and social justice, the relationship between income inequality and trade deficits, the relationship between income inequality and migration, the relationship between income inequality and globalization, and the relationship between income inequality and economic efficiency (Gülcü,2025; Sarsılmaz,2025; Khasanova, 2025; Altuntaş, 2024; Nyang, 2023; Şimşek, 2022; Bahbah, 2023; Cazeiro, 2021; Obiero, 2021; Oyebamiji, 2020; Ayhan, 2018).

Studies on human development in the literature have focused on the international outlook of the human development index, the relationship between human development and employment, the relationship between human development and innovation, the relationship between human development and productivity, the relationship between human development and democracy, and the relationship between human development and development (Çetingüç, 2024; Dasic, etc., 2020; Bawa,2017; Erdoğan, 2010 ; Gerring, etc., 2012).

This study aims to determine the relationship between expected years of schooling, one of the fundamental parameters of human development, and income inequality and gender inequality, as well as the extent to which income inequality and gender inequality affect expected years of schooling. The findings of the study were determined within the framework of the following questions:

- ✓ Is there a significant difference between the countries with the lowest human development index and those with the highest in terms of income inequality, gender inequality, and average expected years of schooling?
- ✓ Is there a meaningful relationship between income inequality, gender inequality, and average expected length of schooling?

- ✓ Does gender inequality mediate the relationship between income inequality and expected years of schooling?

The findings identified in this study are expected to raise awareness regarding the need to develop policies addressing existing gender and income inequality when determining countries' compulsory education periods.

2 METHOD

2.1 Study design

This study is a correlational survey model study using quantitative research methods. The correlational survey model is a research model that aims to determine the direction and degree of simultaneous change between at least two or more variables (Aypay, 2022).

2.2 Study group

The countries selected for the study group were determined using the purposive sampling method with the opposite sampling technique. Contrastive sampling is the technique of forming samples related to the problem from individuals, events, objects, or situations with opposing characteristics (Aypay, 2022). The countries in the working group are divided into two separate categories: the top 14 countries with the highest human development scores according to the Human Development Index and the bottom 14 countries with the lowest human development scores (HDI, 2025). These countries are shown in Table 1.

Table 1

Countries in the study group

Countries with the Lowest Human Development	Niger	Gambia
	Mali	Uganda
	Mozambique	Myanmar
	Guinea	Yemen
	Afghanistan	Senegal
	Burundi	Cambodia
	Malavi	Pakistan
Countries with the Highest Human Development	United State	Denmark
	Australia	Germany
	Canada	Austria
	Switzerland	,Belgium
	Norveç	Sweden
	Holland	,Iceland
	Japan	UK

Source: https://hdr.undp.org/data-center/country-insights#/ranks

The working group was selected from among the countries with the highest and lowest scores, both below and above the world average value (.61) of the Human Development Index.

2.3 Data collection tools

The panel data used in the study were downloaded from the United Nations Development Program (UNDP) database, which shows the ranking of the countries in the study group (28 countries), while the panel data on income inequality were downloaded from the GINI index.

Income Inequality Data: The income inequality scores of the countries in the working group are based on the current panel data from 1990 to 2023 included in the GINI index (GINI, 2024). The GINI coefficient was developed in 1912 by Corrado Gini, using the Lorenz curve as a reference. This coefficient ranges between "0" and "1". A coefficient of '0' means that income distribution is absolutely equal among individuals, while a coefficient of "1" means that income distribution is completely unequal.

Gender Inequality Data (GII): The panel scores for gender inequality between 1990 and 2023 for the countries in the working group were downloaded from the Gender Inequality Index (UNDP, 2025). The GII coefficient ranges between "0" and "1". If the coefficient is close to '0', gender inequality is considered low, while if it approaches "1", gender inequality is considered high.

Expected School Duration Data: Çalışma grubunda yer alan toplam 28 ülkenin beklenen okul sürelerine ilişkin panel veriler Human Development Index veri tabanından indirilmiştir (HDI, 2025).

2.4 Data analysis

The normality test performed in the Jamovi 2.6 package program resulted in the following: data related to the expected average school duration (ShapiroWilk - Skewness (.066) > .05; Kurtosis (1.04), > .05), data related to income inequality (ShapiroWilk - Skewness (.221) > .05; Kurtosis (1.26), > .05), and data related to gender inequality (ShapiroWilk - Skewness (.129) > .05; Kurtosis (1.11), > .05) were found to be normally distributed. Parametric tests, including the t-test, correlation, and mediation test, were performed on data showing a normal distribution.

3 RESULT

According to the analysis results obtained using the Jamovi 2.6 program, t-tests, correlation tests, and mediation tests were performed on the data related to human development, gender inequality, and income inequality in countries, and the results are presented in Tables 2-3 and Figures 1-2.

Table 2

T-test results for income inequality, gender inequality, and expected length of schooling

	Country	N	x̄	SS	F	T	P
Income Inequality	Countries with the Lowest Human Development	14	.30,76	9.262	6.97	5.91	.000**
	Countries with the Highest Human Development	14	.14,98	3.703			
Gender Inequality	Countries with the Lowest Human Development	14	.66	.163	12.03	8.03	.000**
	Countries with the Highest Human Development	14	.09	.052			
Expected Years of Schooling	Countries with the Lowest Human Development	14	8.5	1.705	.086	13.59	.000**
	Countries with the Highest Human Development	14	17.3	1.710			

*** P< .05*

Of the 28 countries in the working group, 14 are in the category of countries with the lowest human development scores, while 14 are in the category of countries with the highest human development scores. According to the average of data from 1990 to 2023, the average expected length of schooling in countries with low human development scores was 8.5 years, while in countries with high human development scores, the average expected length of schooling was 17.3 years. According to the average of data from 1990 to 2023, the average income inequality (.35) was high in countries with low human development scores, while the average income inequality (.14) was low in countries with high human development scores. According to the average of data from 1990 to 2023, the average gender inequality in countries with low human development scores (.66) was high, while the average gender inequality in countries with high human development scores (.09) was low.

A significant difference (p< .05) was found between the average gender inequality in countries with low human development scores (.30,76) and the average gender inequality in countries with high human development scores (.14,98). It has been observed that gender inequality is quite low in countries with high human development scores.

It has been determined that there is a significant difference (p< .05) between the average income inequality of countries with low human development scores (.66) and the average income inequality of countries with high human development scores (.09). It has been observed that income inequality is higher in countries with low human development scores.

A significant difference (p< .05) was found between the average expected length of schooling in countries with low human development scores (8.5 years) and the average expected length of schooling in countries with high human development scores (17.3 years). It has been observed that the expected length of schooling is longer in countries with high human development scores.

Table 3

Correlation matrix

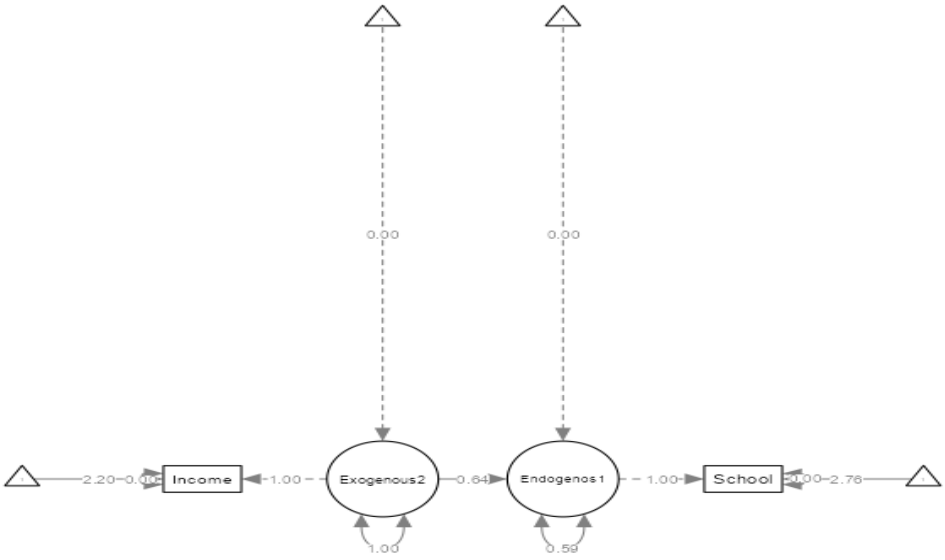
		Income Inequality	Gender Inequality
Expected Years of Schooling	r	-.64**	-.81**
	p	.000	.000

**. *Correlation is significant at the 0.01 level*

Based on the panel data averages of countries with high and low human development scores, the two-tailed correlation (Pearson) test revealed a moderately inverse and significant relationship (-.64) between expected years of schooling and income inequality. It can be stated that as income inequality increases, the expected length of schooling decreases, and as income inequality decreases, the expected length of schooling increases. There is a high level of inverse and significant relationship (-.81) between expected school duration and gender inequality. It can be stated that as gender inequality increases, the expected length of schooling decreases, and as gender inequality decreases, the expected length of schooling increases.

Figure 1

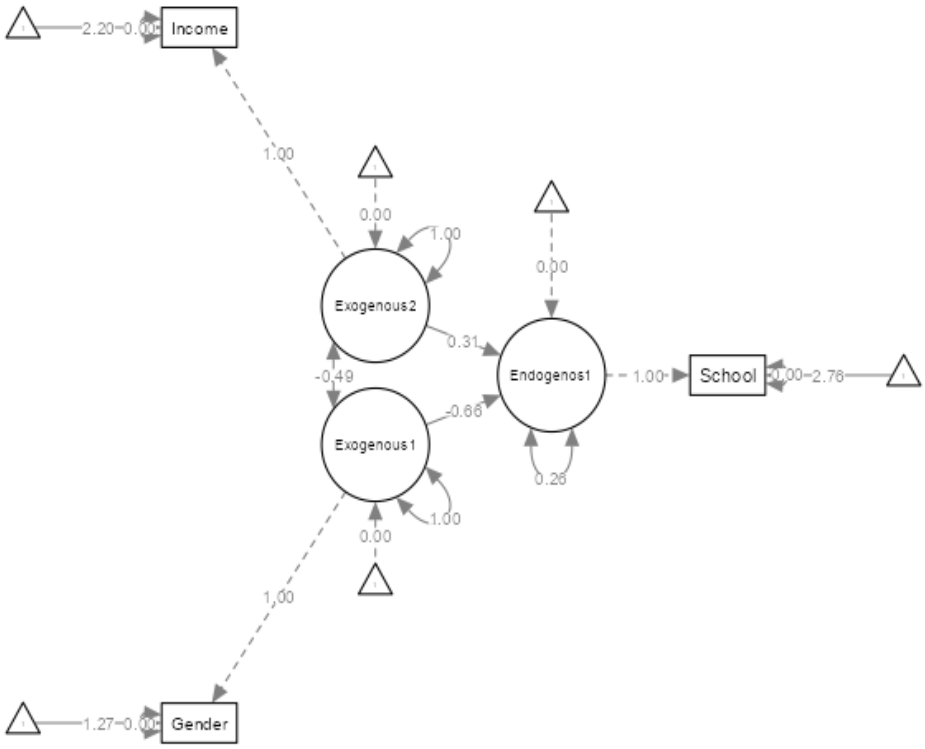
Path analysis of income inequality on expected years of schooling



According to the panel data average of all countries in the working group, the path analysis conducted in the Jamovi 2.6 program determined that income inequality has a

high impact (.64) on expected school duration. Variations in expected school duration can be explained by income inequality across countries.

Figure 2
Mediation model



When gender inequality is included alongside income inequality in the expected length of schooling, the effect of income inequality on the expected length of schooling has declined to a level of (.31). It has been determined that the effect of gender inequality on expected school duration (.66) is at a higher level. It is observed that gender inequality is a more decisive factor than income inequality in the variability of expected school durations across countries. Gender inequality has been found to have a significant mediating effect between income inequality and expected length of schooling. The fit indices for this mediation model are [$\chi 2/df=1.06$, NFI = 0.99, NNFI = 0.96, CFI = 0.99, IFI = 0.97, RFI = 0.98, GFI = 0.99, AGFI = 0.99, RMSEA = .044, and SRMR = .018] are stated to be at a high level (Hair, et al., 1998; Hoyle, 1995; Hu & Bentler, 1999; Kline, 2005; Browne & Cudeck, 1992; Baumgartner & Homburg, 1996; Team, 2024; Gallucci & Jentschke, 2021; Rosseel, 2019; Epskamp, etc., 2019). When making regulations regarding the extension of the expected school term, priority should also be given to policies aimed at reducing gender inequality and income inequality.

5 DISCUSSIONS

There are different studies in the literature that support the findings identified in this study; however, the sample group of these studies is limited in scope:

In his 2024 study, Güneş determined that income inequality is lower in countries with high human development. Various studies have determined that in some countries with high human development index scores, income inequality is lower than in other countries (Kiselakova, etc. 2018; Hamid, 2019).

Other researchs have determined that economic crises occur more frequently in countries with low levels of human development, and that poverty and female unemployment are high in these countries (Gongwei, 2011; WHO, 1998).

Studies have found that income inequality is also high in some countries where gender inequality is high (Baloch, etc., 2018; Bardakçı & Oğlak, 2022; Çabaş & Torun, 2022 ; Shah & Krishnan, 2024).

Research conducted on Syrian children living in areas with high income inequality has determined that these children are more likely to drop out of school, experience difficulties accessing educational materials, and that the rate of girls not attending school is high. (Karakaya, 2020; Çakırer Özservet & Sirkeci, 2016; Erdoğan & Ünver, 2015; Karaman & Özçalık, 2007).

6 CONCLUSIONS

The findings identified in the study can be summarized as follows: There is a significant difference between the average gender inequality scores of countries with low human development scores and the average gender inequality scores of countries with high human development scores.

There is a significant difference between the average income inequality of countries with low human development scores and the average income inequality of countries with high human development scores. It can be said that individuals in countries with low human development scores are at greater risk than individuals in countries with high human development scores in terms of both income inequality and gender inequality.

There is a significant difference between the expected length of schooling in countries with low human development scores and that in countries with high human

development scores. The expected length of schooling is longer in countries with high human development scores than in countries with low human development scores. This situation reveals that the level of human development is a decisive parameter in the duration of schooling.

There is an inverse and significant relationship between the expected length of schooling and income inequality, based on the average of all countries in the working group. There is an inverse and significant relationship between expected school duration and gender inequality. It has been observed that gender inequality is a stronger determinant than income inequality on the average expected length of schooling across countries, and that gender inequality has a mediating effect between income inequality and expected length of schooling.

In order to increase the expected length of schooling, improve school enrollment, and facilitate access to education, countries must prioritize policies that reduce gender inequality. In countries with high income inequality, the educational needs of disadvantaged individuals and families must be fully funded by the state. National education ministries should take the lead in developing policies for disadvantaged groups by monitoring data on gender inequality and income inequality through their relevant departments.

REFERENCES

Akbulut, S. (2022). *Domestic violence experiences of women victims of violence: Aksaray*

case. Master Thesis. Nevşehir Hacı Bektaş Veli University Institute of Social Sciences, Nevşehir. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Aktaş, F. (2025). *A research on female labor force and gender inequality in labor markets in*

the context of sustainable development: The case of Izmir province. Master Thesis. Ege University Institute of Social Sciences, İzmir. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Alesina, A., & Perotti, R. (1996). Income distribution, political instability, and investment.

European Economic Review, 40(6), 1203-1228. https://www.sciencedirect.com/science/article/abs/pii/0014292195000305

Altuntaş, T.Ö. (2024). *The Effects of poverty and income inequality on internal migration: An*

analysis on türkiye. Master Thesis. Karadeniz Technical University Institute of Social Sciences, Trabzon. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Arrow, K.J., Bowles, S., & Durlauf, S.N. (2000). *Meritocracy and economic ınequality.*

Princeton Univ. Press. https://www.degruyterbrill.com/document/doi/10.1515/9780691190334/html

Ayhan, H. (2018). The relationship between economic development and income inequality:

Kuznets curve. Master Thesis. Istanbul Bilgi University Graduate School, Istanbul. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Aypay, A. (2022). *Research methods design and analysis*. Ankara: Nobel Publishing.

Ataklı Y.R. (2016). Women employment and economic violence from the aspect of social

gender inequalıty. *Journal of Life Economics, 3*(3), 77-100. https://www.ceeol.com/search/article-detail?id=705772

Atalay, E., & Dinç, A. (2020). Gender and women's health. Demir, H & Duran, N.(Editör).

Curret Researches in Health Sciences. Gaziantep: Özgür Publication. https://www.ozguryayinlari.com/site/catalog/book/91

Bahbah, M.M.M. (2023). *The impact of income inequality on economic growth in the MENA*

region (1996-2020): An examination of direct and indirect effects. Master Thesis. Anadolu University Institute of Social Sciences, Eskişehir. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Baloch, A., Noor, Z.M., Habibullah, M.S., & Bani, N.Y. (2018). The effect of the gender

equality on income inequality: A dynamic panel approach. *Jurnal Ekonomi Malaysia, 52*(2), 3-17. http://dx.doi.org/10.17576/JEM-2018-5202-1

Bardakçı, Ş., & Oğlak, S. (2022). Gender gap ındex and Turkey. *Turkish Journal of Social*

Policy, 3(1), 71-90. https://dergipark.org.tr/tr/pub/tpd

Barro R.J. (2000). Inequality and growth in a panel of countries. *Journal of Economic*

Growth, 5(32), 5-32. https://link.springer.com/article/10.1023/A:1009850119329

Başarer Berber, Z. (2021). The Way to remove gender ınequalıty ın educatıon. *Uluslararası*

Türkçe Edebiyat Kültür Eğitim Dergisi, 10(3), 1215-1223. https://dergipark.org.tr/en/pub/teke/issue/65009/1000834

Bawa, A. (2017). *Reassessing efficiency in human development among ECOWAS countries*.

Master Thesis. Istanbul Medeniyet University Institute of Social Sciences, Istanbul. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Benabou R. (1996). Heterogeneity, stratification, and growth: Macroeconomic implications of

community structure and school finance. *American Economic Review*, 86(3), 584-609. https://www.nber.org/papers/w4311

Bingöl, O. (2014). The Fact of gender and womanhood in urkey. *KMU Journal of Social and*

Economic Research, 16(1), 108-114. https://doi.org/10.18493/kmusekad.36760

Boyacıoğlu, G. (2016). From yesterday to today: Violence against women in turkey and

national women's studies: an ınvitation to psychological research. *Turkish Journal of Psychology*, 19, 126-145. https://www.researchgate.net

Cazeiro, A.S.R. (2021). *The impact of trade flows on income distribution and poverty in*

Angola. Istanbul Commerce University Institute of Foreign Trade, Istanbul. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Core, R., Team (2024). *R: A Language and environment for statistical computing*. (Version

4.4) [Computer software]. https://cran.r-project.org.

Çabaş, M., & Torun, M (2022). The Effect of gender inequalıty on income distribution in

oecd countries. *Journal of Administrative Sciences,* 194-217. https://doi.org/10.35408/comuybd.1151966

Çakırer Özservet, Y., & Sirkeci, İ. (2016). Children and migration. *Journal of Migration,*

3(1), 1–4. https://doi.org/10.33182/gd.v3i1.552

Çetingüç. B. (2024). *Examining the relationship between innovation, competitiveness, human*

development at the country level and the impact of national culture on these relations. Doctoral Thesis. Istanbul Technical University Graduate School of Education, Istanbul. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Dasic, B., Devic, Z., Denic, N., Zlatkovic, D., Ilıch, I.D., Cao, Y., Jermsittiparsert, K., & Van

Le, H. (2020). Human development index in a context of human development: Review on the western Balkans countries. *Brain and Behavior, 10*(9). https://doi.org/10.1002/brb3.1755

Durgun C., & Gök, G.O. (2017). Comparatıve analysıs of brıcs & G7 ın the context of socıal

gender ınequalıty. *Journal of Beykent University Social Sciences, 10* (2), 20-32. https://dergipark.org.tr/tr/pub/bujss/issue/32982/288737

Erdoğan, E. (2010). *A complex dynamical systems model of education, research, employment,*

and sustainable human development. Master Thesis. Middle East Technical University Institute of Natural Sciences, Ankara. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Erdoğan, M., & Ünver, C. (2015). *The Turkish business community's views, expectations, and*

recommendations regarding Syrians in Turkey. https://www.tisk.org.tr/yayin/46661-turk-is-dunyasinin-turkiyede-suriyeliler-konusunda-gorus-beklenti-ve-onerileri---2010.pdf

Epskamp S. , Stuber S., Nak J., Veenman M,, Jorgensen T.D. (2019). *SemPlot: Path*

Diagrams and Visual Analysis of Various SEM Packages' Output. [R Package]. https://CRAN.R-project.org/package=semPlot.

Galor, O. (2000). Income distribution and the process of development. *European Economic*

Review, *44*(4-6), 706-712. https://doi.org/10.1016/S0014-2921(99)00039-2

Gallucci, M., Jentschke, S. (2021). *SEMLj: jamovi SEM Analysis*. [jamovi module]. For help

please visit https://semlj.github.io/.

Gerring, J.,Thacker, S.J., & Alfaro, R. (2012). Democracy and human development. *The*

Journal of Politics, 74(1). https://doi.org/10.1017/S0022381611001113

GINI (2024). *Gini index. Data reseources.* https://data.worldbank.org/indicator/SI.POV.GINI

Gongwei, Z. (2011). Chinese Human Development Index and comparative study across its

regions. *Population Research, 35*(6), 78. https://rkyj.ruc.edu.cn/EN/abstract/abstract98.shtml

Gülcü, A. (2025). *Essays on financialization, income inequality and growth.* Docroral Thesis.

Middle East Technical University Institute of Social Sciences, Ankara. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Gümüş, H. (2024). *Gender inequality and violence against women Eyüpsultan example.*

Master Thesis. Namık Kemal University Institute of Social Sciences, Tekirdağ. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Hamid, E.S. (2019). Human development ındex and the forming factors: The Effect of global

competitiveness ındex in ten asean countries. *Journal of International Business and Economics, 7*(2), 74–81. https://doi.org/10.15640/jibe.v7n2a7

HDI. (2025). *Human developments insights*. https://hdr.undp.org/data-center/country-insights#/ranks

Kandiyoti, D. (1997). *Slaves, sisters, comrades: Identities and social transformations.*

Istanbul: Metis Publication.

Khasanova, Y. (2025). *The impact of monetary policy on income inequality in advanced and*

emerging economies. Master Thesis. Istanbul University Institute of Social Sciences, Istanbul. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Karaca, T. (2024). *Women's employment and gender inequality: The case of Atatürk*

University. Master Thesis. Atatürk University Institute of Social Sciences, Erzurum. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Karakaya, Ş. (2020). *The problems that Syrian children experienced living in Turkey and*

impact of those problems during the schooling process and solution proposals in the context of school social work. Master Thesis. Istanbul University-Cerrahpaşa Graduate School, İstanbul. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Karaman, B., & Özçalık, M. (2007). A Result of ıncome ınequality in turkey: Child labor.

Journal of Management and Economics, 14(1), 25-41. https://dergipark.org.tr/en/pub/yonveek/issue/13686/165617

Kiselakova, D., Sofrankova, B., Cabinova, V., Onuferova, E., & Soltesova, J. (2018). The

impact of r&d expenditure on the development of global competitiveness within the CEE EU countries. *Journal of Competitiveness, 10*(3), 34–50. https://doi.org/10.7441/joc.2018.03.03

Nyang, M. (2023). *The relationship among income inequality, economic growth, and trade*

openness: Kuznets curve approach for the case of Kenya. Master Thesis. Ondokuz Mayıs University Institute of Social Sciences. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Yavuz, G. (2015). Women’s role in the production of patriarchal values of masculinity:

Trabzon case. *Fe Journal Feminist Critique, 7*(1),116-130. https://doi.org/10.1501/Fe0001_0000000136

Obiero, W.L. (2021). *Three essays on debt, income inequality and economic growth*. Master

Thesis. Eskişehir Osmangazi University Institute of Social Sciences, Eskişehir. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Oyebamiji, O.A. (2020). *Dynamic analysis of growth, poverty and inequality in West African*

countries. Master Thesis. Ege University Institute of Natural Sciences, İzmir. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Rosseel, Y. (2019). lavaan: An r package for structural equation modeling. *Journal of*

tatistical Software, 48(2), 1-36. https://scholar.google.com/scholar?hl=tr&as_sdt=0%2C5&q=Rosseel%2C+Y.+%282019%29.+lavaan%3A+An+R+Package+for+Structural+Equation+Modeling.+Journal+of+tatistical+Software%2C+48%282%29%2C+1-36.+&btnG=

Sarsılmaz, B. (2025). *The role of absorptive capacity on the effects of foreign direct*

investment on income inequality and productivity. Master Thesis. Hacettepe University Institute of Social Sciences. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

Savaşkan, E. (2019). A Conceptual study on gender ınequality for women managers. *ACU*

International Journal of Social Sciences, *5*(2), 1-23. Doi: 10.22466/acusbd.585271

Shah, C.S., & Krishnan, S. (2024). ICT, gender inequality, and income inequality: A panel

data analysis across countries. *Information Systems Frontiers, 26* (1), 709-727. https://link.springer.com/article/10.1007/s10796-023-10396-4

Şimşek, C. (2022). *Heterogeneity of the factors affecting income inequality and poverty cross*

country analysis between 2003-2019. Docroral Thesis. Istanbul Technical University Graduate School of Education, Istanbul. https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp

UNDP (2025). *Gender inequality index*. https://hdr.undp.org/data-center/thematic-composite-indices/gender-inequality-index#/indicies/GII

WHO. (1998). *Health ımplications of the economic crisis in the south east asia region.* Report

of Regional Consultation Bangkok, Thailand. https://iris.who.int/bitstream/handle/10665/127844/sea-econ-19.pdf

Yazıcı, F., & Değer-Şahbaz, Y. (2020). Violence towards women ın the context of social

society and reflecting on the printed press ın Turkey. *Intermedia International E-Journal, 7*(12),129-149. Doi: 10.21645/intermedia.2020.71

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All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

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