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An Index for Economic Justice: The Case of Iran

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Abstract

Considering the normative nature of the theories of justice, a distinguished theory of justice could be formulated based on the fundamental teachings of Islam. Hence a new set of indexes are required to put this new concept to test. Through detailed study of the Islamic teachings, the research seeks to formulate a comprehensive theory on economic justice (based on various economic rights). In this theory, removing poverty and unjust inequality is one of the dimensions of justice, but by no means all of it. Then a composite indicator of economic justice was proposed based on this conceptual framework. The indicator was confirmed by 30 experts using the Delphi method with zero (0) as the worst (lowest) economic justice and one (1) as the best (highest) situation. Calculating this indicator for Iran's economy during 2001-2010 showed a minor drop to 0.48 from 0.52. The most important factors in the deterioration of economic justice were the failure to comply with intergenerational justice, limited guarantee for property rights, and exploitation of common resources.

Keywords: Economic Justice, Iranian Economy, Multidimensional Index, Poverty.

JEL Classification: D63, I32, P48

1. Introduction

Theories and indexes of justice underwent huge breakthroughs in the past half-century. In methodology, index is rooted in its theory (OECD, 2008). Thus, discussion about justice index begins with justice theory. After the publication of *A Theory of Justice* (Rawls, 1971) which introduced the principles of a fair social contract as the criteria for justice, other thinkers tackled this issue using other approaches; Posner (1973) assumed the maximization of welfare and the overall wealth as the criteria for the just rules, Deworkin (1981) introduced resource equality as the pivotal principle of justice, Walzer (1983) distinguished between different social domains and identified certain criteria for each and came up with the idea of Complex Equality, and Sen (2009) opposed the transcendental approach to justice and stressed the amelioration of comparative indexes and enhancing the capability of people to fulfill their objectives instead.

The nature of justice is still a controversial normative question facing economic and political thinkers (Kolm, 1996) at the depth of which lies a moral philosophy (Binmore, 2005). Unless clear bases for justice are

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identified, positive issues such as the criteria of justice, measuring the amelioration or deterioration of justice in different societies, and the impact of policies on the indexes of justice will not bear tangible results. As many traditional and modern thinkers agree, the focal concept of justice pivots around rights and responsibilities and the justice of a social scheme depends on how fundamental rights and duties are assigned (Rawls, 1971). In case a person is deprived of his rights or someone violates his rights, one could judge that justice is far from being dispensed. These rights and responsibilities could be in the social, economic, political, and judiciary spheres. The lack of a consensus over a theory of justice and the reason for interminable theoretical contentions over justice is obviously due to the normative nature of the theory of justice (Clark, 1978). Therefore, as long as normative and philosophical differences persist, we will continue to have different indexes of justice. The same differences reflect in the positive analysis of justice (Konow, 2003).

Based on the above discussion, it is safe to say that the best way to get past the issue of justice indexes for a Muslim society is to refer to normative resources and religious texts. These religious texts are fully legitimate, justified, and convincing in a Muslim society. Thus, they can serve as a means for reducing the theoretical contentions in Muslim communities.

What we have discussed so far does not imply that there is no difference of opinion among Muslim thinkers. Qotb (1953), Sadr (2000), Motahari (2007), and Hakimi (1988) are among the pioneers of an [Islamic] theory of justice; however, their perceptions are not precisely similar with those of Iqbal (1988) and Chapra (2007). Their different perspectives are, however, not grave and are on limited issues. The main reason could be that their viewpoints are all founded upon common Islamic epistemological, anthropological, and ontological grounds. We do not follow the example of any of the Islamic thinkers and solely concentrate our efforts on the Holy Quran to develop a new and comprehensive theory of economic justice.

There are two steps to creating an index for economic justice: first is to choose an accurate conceptual framework (What exactly is Justice?), and second is to choose a method to quantify that concept. The first section of the article is predicated upon a research conducted on the Holy Quran and deals with defining the concept of economic justice which is the result of a long-time research. The second section discusses the methodology of building this new index and finally, in the third section, the calculations of the new index of economic justice are carried out. The last section presents the conclusion.

2. Conceptual Framework

In recent decades, western academic circles have been probing into the economic rights issue. With the introduction of the ‘Law and Economics’ approach in the '60s, hopes for a fundamental development in our understanding of economic rights began to grow; however, none of the currents within this approach (positive, normative, and functional) led to an

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authentic basis for a thorough definition of economic rights (Parisi and Klick, 2004). The importance of agreeing upon economic rights lies in the fact that the explanation of these rights is central to a theory of justice. Despite the existence of vast contending theories of justice, it could be said that all these theories seek to identify social rights and responsibilities. Even questions such as 'What is the right thing to do? (Sandel, 2009) are fundamentally rooted in the nature of human rights and responsibilities.

In the selected approach, a fair condition is one in which all rights are respected. Justice implies a condition where not only everyone's rights, but also the rights of the whole society are respected (Motahari, 2007). If an individual is entitled to the right of learning and choosing a profession, others should deprive him of his rights; if all the people have the right to equal access to public resources and information, the government and other bodies should not adopt discriminative or exclusive measures; in case a person has property rights or rights to his labor force, others are not allowed to violate his rights. If a person enters a contract to take part in an economic activity and ends up in financial loss, he has no right to (against the contract) demand interest from his partner. If the society has the right to utilize its resources, then every process and policy leading to the improper utilization of public resources is unfair. If a handicapped or disabled individual is entitled to proper nutrition and healthcare, then the society is obliged to provide for her standard welfare and so on. Depending on the society or different periods of time, the mechanisms for fulfilling the rights could vary.

The important question is what constitutes the basis or source of rights? In other words, what criteria help recognize a series of rights for the person A and different rights for the person B? The Islamic approach introduces some roots more than social consensus:

- First: every natural talent is the basis for a natural right. For example, the talent for education is the basis for the right to public education and training (Motahari, 1982).
- Second: some rights arise from doing, work, or action and some potential natural rights become actual rights through work. In other words, although everyone is entitled to natural rights, their share is determined based on their work and activities (Motahari, 1990).
- Third: some rights arise from the purpose of Creation. For example, an infant is entitled to mother's breast milk because the purpose of creating the milk had been for the infant to drink (Beheshti, 1999).
- Fourth: some rights arise merely from contracts and agreements which are not among the three above-mentioned categories of rights and must not contradict them, such as, acceptance of citizenship, becoming a member of an agreement, partnership, or a marriage contract. The more societies move from simplicity to complexity, the more share is allotted to contractual rights, and even other rights tend to be cloaked legally and officially.

When this view is applied, no basis remains for claiming that only individuals are entitled to 'rights'. In other words, in the same sense that we may

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entitle an infant, insane individual, or an animal to some rights and hence other people are made responsible thereupon, some rights could be conceived for the community as a whole (Motahari, 2007); that is, if some individuals dump healthy agricultural products into the sea or burn oil fields, they have violated the right of the community, a right which arises from the capacity of those resources or the purpose of their Creation (their marginal utility for community is not zero). Many Islamic accounts maintain certain rights for inanimate objects, such as in the 'The Book of Law' written by Imam Sajjad (Hakimi, 1998). Extending this legal perspective to history will enable us to come up with a comprehensive theory which doesn't exclusively observe the rights of the people of this generation, but also those of the people who will be born in the future (Hakimi, 1998), so that every person is entitled to resources and endowments. Intergenerational rights are the result of this extension.

According to the Quran, the content of the principles of justice (basic rights) may not be submitted to public opinion, although it needs social consent in order for its mechanisms to be implemented (Motahari, 2007). Unlike social contract that extracts the principles of justice merely from public agreements or the majority consent, the Holy Quran relates the fairness or unfairness of deeds to their nature or consequences and doesn't subject it to favorable or unfavorable social opinion. To elaborate further, there is no doubt about fundamental principles and the basis of justice in this regard; however, trivial and temporal-spatial regulations are subject to circumstances and convention.

There are two fundamental aspects to the theory of economic justice in the Quran:

First. Respecting property rights: in this aspect, justice is expressed by the keyword 'gratefulness' and unfair circumstances are expressed by the opposite term 'ungratefulness' (Shokr and Kofran, in Arabic). In Islamic justice, every potential resource that we can use is entitled to rights when it comes to human interaction. There are vast categories that are subject to this right, from Natural resources to Financial or physical assets and also talents and opportunities.

Islamic logic holds that extreme exploitation of resources by human beings will distance humanity from divine blessings, which, in turn, will lead to the deterioration of the economic and social system. On the one hand, according to Muslim scholars, gratefulness is a subset of the concept of justice and wasting the properties and resources is a subset of injustice on the other (Tabatabaei, 1982).

Second. Respecting the individual and public rights: in this aspect, the Quran emphasizes even more everyone's duty and responsibility regarding human beings' rights. Some Quranic evidence stating the violation of economic rights are: non-payment of the rights of the poor, not respecting property rights, non-payment of rewards or full wage, usury, theft, and failing to fulfill promises.

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Based on the two categories mentioned above, a comprehensive judgment about the extent to which an economic system works justly can be made. With regard to property rights, justice is embodied in the utilization of the property by humans (at production or final consumption), and regarding the rights of humans, justice is embodied in the process of ownership, transaction, and redistribution.

Ownership and transaction are the pillars of every economic system which underpin production, redistribution, and consumption activities. The concept of 'contract' is sometimes inserted into economy along with ownership and transaction; however, an economic contract (either official or unofficial) only expresses the content of a transaction and is not an independent entity. Every transaction is, indeed, an exchange of a right or a series of rights (Demsetz, 1967), such as ownership or utilization.

Two categories of transactions could be imagined accordingly:

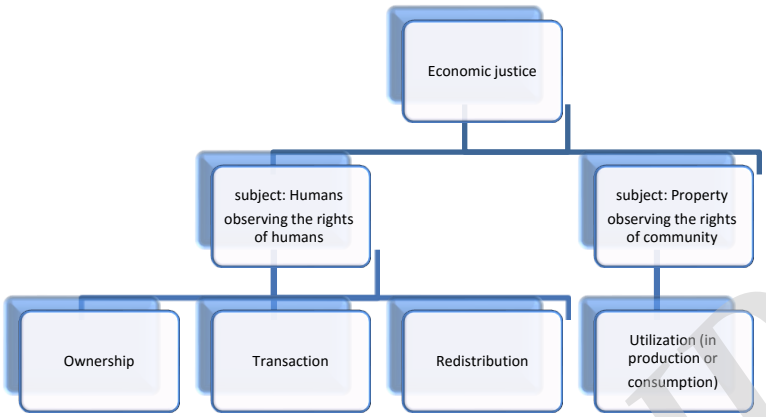
- A transaction solely including the exchange of right, such as option contract. In this case, the exchange of right is the subject and no more.
- A transaction including the exchange of a property and all (or some) rights thereupon. In this form, the exchange of right is circumstantial, where the subject of exchange could be goods, work force, natural resources, or capital. In Shia jurisprudence, there is no independent market or price for money, and profit belongs to capital (Tutunchian, 2009).

Unlike traditional economic methods of not engaging independently in transaction, the Quran pays close attention to justice in proprietary circumstances, principles of transaction, and contracts. The circumstances under which obligations, pacts, and contracts are formed are, without doubt, a pillar for transaction justice. As mentioned earlier, these pacts extend to many areas of economic market (or even to contracts among nations). Islam puts clear emphasis on commitment to contracts and social obligations and utilizes legal and ethical guarantees to that aim (Hakimi, 1998).

On the other hand, redistribution is necessary when involuntary poverty is concerned: that is, those who, for some reasons out of their control, cannot take active part in the economy and earn a living, or those who despite their efforts cannot earn a living and run their household. This primary emphasis is because of a greater emphasis on the part of the Quran on determining the shares based on the efforts everyone makes (Motahari, 1998), and that the burden everyone bears is based on his abilities and talents, and Allah never charges a soul except according to what He has given it. In circumstances which despite observing this principle, the individual's living cannot be earned, the second principle, the redistribution right, will take effect. One of the prominent teachings of the Holy Quran is the long term prospects and benefits of the attempts made to remove poverty and deprivation from the society (Hakimi, 1998).

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Source: Khandoozi (2012)

Fig. 1. Economic justice dimensions

Although the Holy Quran has meticulously defined rights and regulations for the livelihood and welfare of the poor, the most important criticism that comes to mind against the issue of redistribution is its being reduced to the idea of equity. It should be noted that the Quranic logic behind the idea of redistribution is not at all tantamount to equality in incomes or consumption. Indeed, the Quran firmly maintains that even in utopian conditions, people are granted different degrees and ranks, which is a tradition of society, and they will stand trial for whatever they are endowed with (Motahari, 2007). However, under circumstances where the disparities result from unfair opportunities or physical and mental retardation, the Quran has devised mechanism such as Zakat, Khoms (two Islamic taxes), charity, and interest-free loans in order to rectify the redistribution process.

In another sense, our relations with natural resources and endowments are formed in two broad categories: first is to utilize them in order to create a more perfect product and second, in the form final consumption. The regulations that must be heeded in this section are justice in utilization. There are many references to natural resources in the Quran where they are considered as a means of earning a livelihood and signs of divine mercifulness. In addition to natural endowments granted to human beings, the Holy Quran has related many crafts to the prophets. Encouraging business and promoting the cultivation of lands are other recommendations from the Holy Quran as a means of putting the resources to social welfare (Hakimi, 1998).

There is also the recurrent concept of consumption, as the most inclusive economic behavior. Just like some of our methods for treating the production factors which are against their nature, there are some consumption methods which violate the rights of property and the community. However, this point doesn't make much sense in conventional logic, because it holds that the consumer is free to use the goods at his disposal in any way. From an Islamic point of view, consumption is not entirely a personal matter. The general principle in the Quran maintains that a permission (being Halal) be obtained for consumption, provided that, first, the product not be

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untouchable such as blood, wine, pork meat and dead corpse, and second, the product be obtained through legitimate transaction and not by violating others' rights (such as cheating).

Based on the research, the list of economic rights and responsibilities is according to Table 1.

3. Index Methodology

This section presents an overview of different economic indicators known as social justice indicators; then, an analysis of these indexes, based on our devised theory, will be made. In the end, a fitting methodology for converting the concept of justice, as expounded in the previous section, into a quantitative index will be attempted.

The literature on conventional economics identifies the indexes of economic justice literally as the indicators of 'distributive justice', which indicate the fairness of the distribution domain (Phelps, 1987). These indexes could be broken down into different types. As the needs of the research demanded, the indexes of distributive justice (not in the Rawlsian view of economics) are broken down into two broad categories:

- Inequality Indicators: some indicators are devised as a means for measuring our distance from equal distribution; indexes such as Theil, Herfindahl, Elteto-Frigyes, Gini Coefficient, Hoover, Dalton, and Atkinson. The bulk of the inequality indexes are made based on these three grounds: based on social welfare function, based on anthropy or information, or based on the structural method (Cowell, 2000).

Table 1. List of economic rights (Islamic perspective)

The Scope of Right	The List of Rights and Responsibilities
Ownership and Transaction	1. The rights of the individuals to reap the benefits of legal private ownership: the responsibility of others to respect the private ownership 2. The right of the society to reap the benefits of public properties: the responsibility of everyone to respect this right 3. The right of the individuals to transfer their properties with consent: the responsibility of others to assure the consent of the trading party 4. The right of the individuals to reap the benefits of transaction: the responsibility of others to be committed to the contract and agreement 5. The right of the individuals to receive actual returns in an exchange: the prohibition of squandering a property (gambling, usury, etc.), betrayal, damaging, and understatement of the property
Redistribution	6. The right of the people to access public properties: the responsibility of the government to provide the access 7. The right of the poor to the affluence of the wealthy, public, and state properties: the responsibility of the affluent and also of the government to provide a decent life for the poor
Utilization	8. The right of the individuals to reap the benefits of their own production through labor and knowledge: the responsibility for paying wages and offering promotions based on labor and knowledge 9. The right of the community to legally utilize its own resources: the prohibition of illegitimate utilization of the resources 10. The right of the community to have the best outcome from its resources: the responsibility of everyone to refrain from dissipating and squandering in production 11. The right of the future generations to benefit from the natural resources: the responsibility of everyone to respect this right 12. The right of the community to use its resources: the responsibility of everyone to refrain from dissipation and overindulgence in consumption

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- Poverty Indicators: some indicators are devised to distinguish the poor population; indexes such as: Poverty Line, Sen, Income Gap Ration, Head-Count Ration, and Human Poverty index. Poverty indexes go through three stages to measure the poverty: first is to devise an indicator for welfare, second is to identify a minimal standard for the welfare indicator with the aim of distinguishing the poor from the non-poor, and finally collecting the data which can present the poverty and welfare indicators (Haughton and Khandker, 2009).

There are various approaches to creating these indexes: Sen distinguishes two different perspectives on poverty: first, a Conglomerative Perspective which assesses social status based on an overall evaluation of the accumulated benefit reaped by the poor and the wealthy at the same time and, second, a Deprivation Perspective which focuses on enhancing the living conditions of the deprived groups (Sen and Anand, 1997). Based on Rawls' view of distributive justice, Sen concentrates mostly on the amelioration of the conditions of the most deprived classes. These two are not alternative perspectives, but could be complementary to one another. Each of these two perspectives could provide us with two categories of indexes for poverty: the indexes solely predicating upon income data and those taking into account the quality of human life.

Each of the indexes for income distribution and poverty has its weaknesses and strengths which enable them to depict a certain aspect of the pattern and fail to explain another. The following points could briefly be mentioned in criticizing the contents of the indexes of poverty and inequality:

First. Comprehensiveness: although tax justice or intergenerational justice is among the issues that are brought up in literature, sometimes conventional approaches to the indexes of justice solely refer to distributive justice. One of the differentiations acknowledged in conventional economics is between the objectives of the distribution and the allocation of wealth, so that effectiveness matters for the former and justice for the latter (meaning the allocation of income or wealth).

As mentioned before, the Islamic theory of justice relies on four categories of economic rights: observing justice in property rights, observing justice in transaction rights, observing justice in redistributive rights, and observing justice in the rights related to utilization. If the indexes of poverty and inequality are to be assessed according to these categories, the following table will be the outcome. As the findings of this article suggest, from the overall 5 types of different indexes for poverty and inequality, only two (absolute poverty and poverty of facilities) are related to the observance of redistributive rights. However, they are indifferent to the reflection of the conditions of proprietary and transaction rights on the one hand, and utilization rights on the other.

Accordingly, the alleviation of poverty is one of the results of fulfilling redistributive rights. However, achieving equality in the distribution of

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income is not intrinsically desirable in Islam. In other words, the case for distributive justice is merely one of the dimensions covered in the Islamic theory of justice. Therefore, any index exclusively bound to one of these dimensions is considered incomplete. Human Poverty Index (HPI), which is an evolved offshoot of Human Development Index, is closer to the optimal index in the sense that it encompasses different welfare and redistributive aspects (Alkire and Foster, 2010); however, since it does not include all scopes of economic justice in Islam, such as justice in transaction and contracts, it is considered an incomplete indicator just like others.

Second. Targeting: the common indexes of economic justice are irrelevant not only because of their lack of comprehensiveness, but also for their incorrect targeting. In this regard, poverty indexes are more credible than inequality indexes. That is, one of the characteristics of a fair economy is a society void of absolute poverty, either in Islamic thought or in the view of most western economic thinkers. However, what is meant by optimal Islamic economic conditions goes beyond the lack of absolute poverty.

When it comes to inequality indexes, this difference [in perspective] tends to be more serious, in a way that they cannot even be considered as incomplete indicators of Islamic justice. The optimum conditions of income equality in a society is the basis for all inequality indexes, and the closer the index number is to perfect equality, the more optimum the conditions; and the farther away it gets, the less optimum the conditions become. Meanwhile, the Islamic account of economic justice doesn't consider income or wealth equality to create optimum Islamic conditions. Equality or inequality of the distribution of endowments is intrinsically of no value in its own right, but in case justice demanded equality (law enforcement,

Table 2. Relationship between poverty and inequality indexes and four categories of rights

		Ownership rights	Transaction rights	Redistribution rights	Utilization rights
Inequality Indexes	Based on social welfare (like Atkinson and Dalton)	Indifferent	Indifferent	Indifferent	Indifferent
	Based on Information (like Theil and Herfindahl)	Indifferent	Indifferent	Indifferent	Indifferent
Poverty Indexes	Based on relative poverty	Indifferent	Indifferent	Indifferent	Indifferent
	Based on absolute poverty (Poverty Ratio, Poverty Gap and Poverty Intensity)	Indifferent	Indifferent	Strong relation	Indifferent
	Based on poverty of facilities or deprivation (Sen and Human Poverty Index)	Indifferent	Indifferent	Strong relation	Indifferent

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opportunities, or access to food, education, and medical care), then it would be optimum; and in circumstance where justice demands unequal treatment or unequal access, then equality is of no value (Motahari, 1990). Islam has never called for income or wealth equality as the requirements for optimal conditions, and instead, has acknowledged legitimate differences as a divine tradition. The exclusive way is to let people at liberty and set the stage for competition. The very name ‘competition’ signifies that since neither the talents nor the efforts and struggles on the part of humans are the same; therefore, there will be disparity in income and wealth (Motahari, 2007).

Accordingly, if we are to create an index for Islamic justice including the four dimensions, we have no choice but to employ a multi-attribute decision making model: the method of composite indexes which is capable of incorporating different dimensions of justice. After mentioning researchers' and policy-makers’ tendency towards multi-dimensional indexes for poverty, Foster and Alkire (2009) propose a way for juxtaposing different dimensions of poverty under a more comprehensive index in the future. Although recent poverty indexes have tried to break from simple indexes and move towards advanced composite ones, they have not yet been able to incorporate important dimensions of distributive justice and poverty. For instance, although the Human Development Index is widely accepted, there is a consensus over the absence of many important aspects of human development in this index (Alkire, 2007).

Therefore, if the composite indicator method is established upon a strong conceptual model, it can, to a great extent, provide us with desirable characteristics for our optimum index. Although the prevalence of the composite indicator method pertains to two decades ago, employing economic indicators (progressive, simultaneous, retrogressive) were first established in the '30s by the National Bureau of Economic Research as a means for anticipating trade cycles of the US economy during the Great Depression. It was later used and modified by other countries (Klein and More, 1982).

The number of Compound Indicators is on the rise globally. Bandura has identified around 160 Composite Indicators in national and international sources (Bandura, 2006). On the whole, the Composite Indicators could be divided into five grand categories: Environmental, Social, Economic, Technological, and Globalization (European Commission, 2008). Specifically, in the economic sphere, around 22 Composite Indicators are used, such as: Business Environment Ranking, Global Competitiveness Index, Doing Business Indicators, Global Risk Index, Composite Leading Indicators, Globalization Index, Technology Achievement Index, Performance in the Knowledge-based Economy, and so on.

As explained in the methodology of the Handbook on Composite Indicators, there are ten steps to constructing a composite index: developing a theoretical framework, selecting variables, imputation of missing data, multivariate analysis, normalization of data, weighting and aggregation, robustness and sensitivity, back to the details, link to other variables, and presentation and dissemination (OECD, 2008).

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4. Data and Index

Applying this methodology will allow us to establish a distinction between the three categories of Input, Output and system Indicators. In this article, we sought to construct a composite indicator for justice which neither shows its background nor its consequences, but internally reveals how the components of economic justice could be identified. Accordingly, we have assigned an indicator (as proxy) to every component of economic justice in a standardized fashion as shown below:

- (Indicator of) Proprietary Rights: theft ratio to population
- (Indicator of) Transaction Rights: financial documents (checks) violation to all
- (Indicator of) Share of the Poor: proportion of population below absolute poverty line
- (Indicator of) Public Resource Access: variance of per capita public budget distribution among provinces
- (Indicator of) Production Factors Share: sensitivity of per capita wage to average workforce productivity
- (Indicator of) Benefiting from Future Generation's share: sales of raw natural resources as exports
- (Indicator of) Optimal Utilization of Resources: total factor productivity.

All these indicators are standardized between zero (min) and one (max). Our reference for the above indicators was official data such as Iranian Statistics Center, Planning and Budget Organization, and Iran Central Bank. The next step demanded that a weight be assigned to every one of the seven components of economic justice in the Index. There were two possible courses of action:

- Same Weight Principle
- Weighting under expert supervision.

Many thinkers believe that when different dimensions of a variable or a concept is covered by a single index, the best way is to adopt the same weights for the dimensions, because any preference shown towards a dimension over another could be subject to objection and criticism. A simple weight average is the best method, because when every dimension has an importance coefficient close to that of others, the interpretation of multidimensional criteria will be easy, otherwise it is difficult (Atkinson, 2003).

In this regard, surveying the experts is a more convincing method for the scientific community, specifically when the highest authorities take part in the survey. Sen (1997) holds that the importance and value of every dimension of the index is not so important an issue to be put to referendum; however, it takes similar mechanisms to determine them and the results should be drawn through debate among different groups. We employed the expert Delphi method in this research. Before proceeding to the Delphi findings, a brief explanation about the method, principle, and its advantage is presented:

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To that end, a questionnaire for weighting the factor of justice was sent to 40 veritable experts, of which, 30 were returned with answers, which was sufficient for Delphi experts to be credible (two round Delphi). The methodology in regard to the assembly of experts deemed a number between 10 and 18 as sufficient (Okoli, 2004).

5. The Index and Discussion

Iran is an extensive, effective and complicated economy in MENA region with a population of 77 million people (98% Muslim). According to World Bank, Iran's GDP in 2013 was about 368 billion US dollars (1207 billion $ in PPP), nearly 21 percent of which was from the oil and gas sector. At the same time, Iran's per capita GDP was 4763 $ (about 15586 $ in PPP) (World Bank, 2014). Iranian life expectancy was 74 years in 2013 with the unemployment rate around 10.5 percent and 37.6 percent labor force participation rate. In recent years, some economic factors including trade and banking sanctions led to the deterioration of Iran economy growth (-2.2 percent in 2013) and inflation (34.7 percent), when average long run growth and inflation rates were respectively 4 and 15 percent.

Improving social and economic justice have been mentioned in Iran's constitution and in five development programs. Especially after the Islamic Revolution in 1979 absolute poverty, illiteracy, and deprivation have decreased more rapidly, most obviously in rural areas (Pesaran and Esfahani, 2009) and Gini coefficient has dropped from 0.50 before the revolution to 0.38 in 2012 (CBI, 2014).

The article aimed at constructing a rough indicator of the components of economic justice in Iran. Figure 2 shows the trend of each indicator (after normalization).

Upon identifying the indicators and the components of justice, and with regard to roughly similar weights assigned to different dimensions of justice in the Delphi method, the last step to calculate the Total Index is to combine the seven aforementioned indicators. Considering the negative direction of some indicators at this step, it was necessary that they be aligned with economic justice, so that any increase in the number of the Total Index

Table 3. The results of expert Delphi

	Average	Standard Deviation	Weight of each unit
Proprietary Rights	8.6	0.81	0.141
Transaction Rights	8.3	1.036	0.137
Right to have a share in production	7.6	1.613	0.124
Right to access public wealth	7.8	1.205	0.18
With to private wealth	7.5	1.822	0.123
Future generations' rights	7.1	1.619	0.117
Right to legal use of property	7.3	1.769	0.119
Right to optimal utilization of the resources	6.6	1.821	0.108

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(approaching 1) signifies getting closer to a fair condition and any decrease means that we are approaching injustice. The total index of economic justice in Iran for the first decade of the 21st century (2001-2010) was calculated accordingly. The index revealed that at the outset there was a rise to 0.530 from 0.523 in the year 2003 for the economic justice criterion and afterwards there was a steady decline up until 2008, when, for the first time, it hit a record low of 0.496 and even worsened in 2010 and fell to 0.482.

Since the Delphi expert method needs not be tested for reliability, it only suffices that the validity of the findings be assured. The concept of validity shows the extent to which the measuring tools delve into our desired characteristics. The mere knowledge of the validity of our measuring tools would not suffice to assure us of the accuracy of the produced data. In other words, through testing the validity of the Delphi findings, we will better understand to what degree the thinker believes our Total Index corresponds to the primary goal (economic justice). In this regard, we should look for a test suitable for rated variables. Kendall's W is one statistical non-parametric test used to assess agreement among raters, like the Friedman, Mann-Whitney U, and the correlation coefficient of Spearman. Kendall's W is also known as Kendall's Coefficient of Concordance for it shows the unanimity and shared ideas among the evaluators on the final output (Okoli, 2004).

This statistical indicator which belongs to non-parametric statistics measures the concordance among evaluators regarding the rates of some factors. In other words, the indicator explains to what extent the evaluators have adopted similar measures in rating the factors. Kendall's W is a figure between 0 and 1, 0 for totally different ideas and 1 for perfect unanimity. The methodology literature maintains that 0.7 suffices to state concordance among the group.

$$R_1 = \sum_{j=1}^{18} r_{1,j} = (28 \times 1) + (2 \times 2) = 32$$

$$R_2 = \sum_{j=1}^{18} r_{2,j} = (28 \times 2) + (2 \times 1) = 58$$

$$R = \frac{1}{2} m(n+1) = \frac{1}{2} \times 30 \times (2+1) = 45$$

$$S = \sum_{i=1}^{n} (R_i \quad R)^2 = (32 \quad 45)^2 + (58 \quad 45)^2 = 13^2 + 13^2 = 338$$

$$W = \frac{12S}{m^2(n^3 \quad n)} = \frac{12 \times 338}{30^2 \times (2^3 \quad 2)} = \quad 0.75$$

Therefor the validity test for the other four factors proves a figure above 0.7 and is confirmed. Thus, Kendall's W is an overall confirmation of the validity of Economic Justice Index from the experts' point of view.

6. Discussion

An overview of the Composite Index of Economic Justice in Iran reveals that

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during the last decade, specifically since 2003, a tangible decline has been observed from 0.530 in 2003 to 0.496 in 2008 and finally plunging to 0.482 in 2010. In other words, the general condition of economic justice in the country has been on a steady gradual decline. The approach of giving the factors the same weights makes the analysis of the index outputs an easier task.

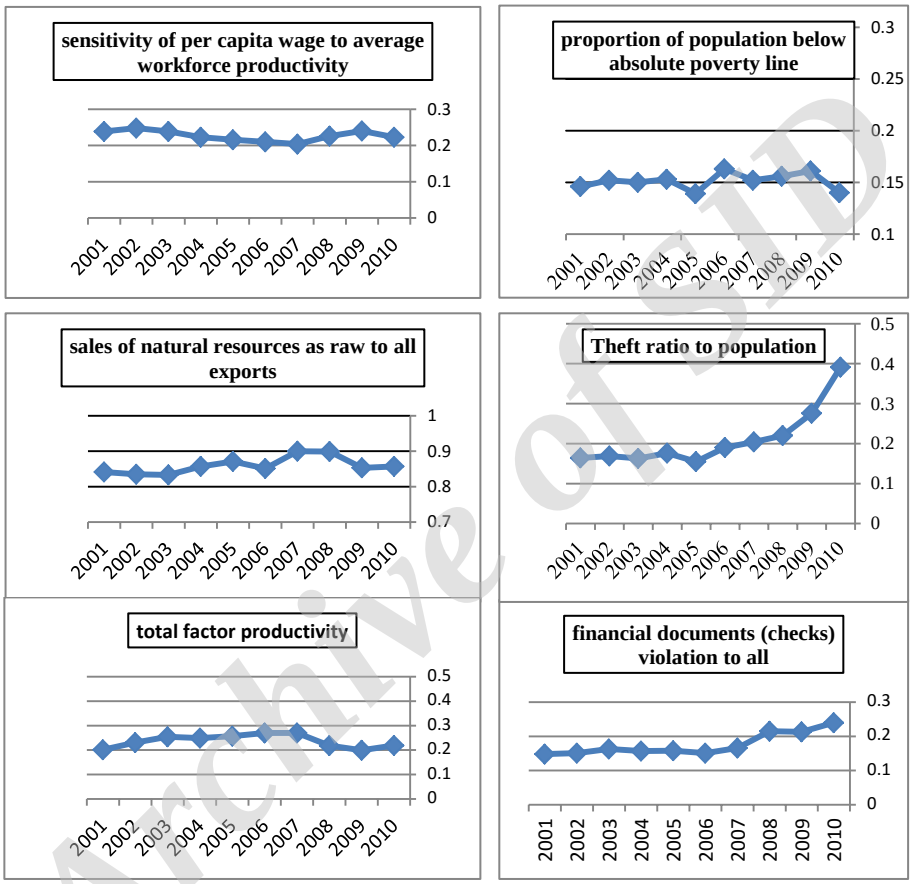


Fig. 2. Indicators' trend in Iranian economy 2001-2010

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Source: Author.

Fig. 3. Overall index of economic justice in Iran (2001-10)

In the course of these years, the lowest indexes among the seven were observed in the following three:

- Weak performance in optimal utilization of the resources
- Disregarding the share of the future generations
- (in recent years) Weak proprietary rights.

It is worth mentioning that in the next stage, the distribution of per capita budgets to the provinces was rated very low, too. If these factors are ameliorated, it is expected that the justice index rise tangibly. Other factors such as the ratio of the population below poverty line (around 15%), or the sensitivity of wage to the workforce efficiency (around 20%) have witnessed subtle fluctuations in this period in a way that a tangible positive or negative impact on the index was not observed. The strength of economic exchange factor was in good conditions until 2009 and positively affected the index, but it has been on a tangible decline since then, which needs precaution.

What does the index decline mean? According to the index methodology, the absolute quantity of justice index is not the most important due to the different initial point in each indicator (which affects the simple average). The significant point is the trend of the overall index. Increasing values over

Table 4. Trend of overall justice index

Year	Overall Index
2001	0.523
2002	0.528
2003	0.530
2004	0.521
2005	0.525
2006	0.519
2007	0.514
2008	0.496
2009	0.495
2010	0.482

Source: Author

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time show improvement in fulfilling economic rights (economic justice) and vice versa. At the same time, decreasing the overall index does not mean that all individual indicators are deteriorating. Because of the similar weight rule, it seems that the increase or decrease of each indicator affects the overall index similarly but with a small difference. Change in some indicators occur gradually, in a prolonged and slow manner, while in others quickly. For example, reducing the poor ratio takes so much time that the indicator quantity does not change significantly (or changes only 1 or 2 percent) and does not affect the index drastically. On the other hand, property right indices may fluctuate 10 percent in a year. If the sensitivity degrees of indicators are similar, the interpretation of the index will be more plausible and straightforward. Based on this feature, it is important to know the source of the index fluctuations. According to this paper, the most significant source of the index reduction in Iranian economy was disrespecting intergenerational justice, weak guarantee of proprietary rights, and non-optimal use of public resources. In another study, one may investigate the causes of those trends in Iranian economy.

7. Conclusions

One of the most influential factors which affect the quality of life is the degree of social and economic justice in a community. The focal point in the theory of social justice is the rights and responsibilities of citizens and the government. Hence, any ideology with different roots in the philosophy of rights and economics will identify different rights, so there are various theories and indexes of justice. This research was conducted as an effort to extract a number of economic rights from the ideological bases propounded in the Islamic teachings. These rights could be categorized in three groups: Proprietary and Transaction Rights, Redistributive Rights, and Utilization Rights. In this view, the common theories of economic justice tie in with only a portion of economic rights in Islam; therefore, the need for a comprehensive theory beyond poverty and inequality was a pressing concern. On the other hand, preventing the dissipation of public resources, known as allocative efficiency in economics, is a component of a fair system. The theory removes the dichotomy between efficiency and justice, because non-efficient use of public resources is a violation of community rights.

A composite indicator constructed from seven factors of economic justice, one of which is poverty, was proposed in this research. The indicator which has been constructed and normalized by means of valid scientific method, held zero (0) as the farthest point from economic justice and one (1) as the ideal condition. Calculating this indicator for Iranian economy in 2001-2010 indicated a slight decline in economic justice from 2003, the bulk of which is due to disrespecting intergenerational justice, weak guarantee of proprietary rights, and non-optimal use of public resources. Indicators such as the population below absolute poverty line have been steady in this period and did not affect the index changes.

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Undoubtedly removing unjust inequality and poverty is one of the dimensions of economic justice. Some developing countries such as Iran had witnessed some success in decreasing inequality and combating absolute poverty, but in non-distributive dimensions, Iran has a long way to go (the index was less than half). Despite the complexity of the concept of justice, recent experience about introducing multidimensional indexes and composite indicators can lead us toward quantifying economic justice. Attracting policymakers' attentions to this multidimensional index and its monitoring will gradually offset weaknesses.

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