Factors Affecting Service Sector's Contribution To GDP in Pakistan

Kashif Rathore
Rubab Shahid
Kashif Ali
Aamir Saeed

In the age of globalization and technology, service sector is the engine for growth as it contributes two-third to global economies. Service sector plays a vital role for economic progress, contributing 59.6 % in Pakistan's Gross domestic product (GDP). This study focuses on the factors affecting service sector's contribution to GDP in Pakistan. For this purpose, Auto-Regressive Distributed Lag method has been used for data analysis. This paper has taken time series data for dependent and independent variables for the time period of 1990-2017. Factors like, foreign direct investment, trade in services effects the service sector's contribution (% GDP) significantly and positively whereas, employment in services and population growth shows a negative effect. Household consumption and Government expenditure depicts insignificant effects for long-run. Pakistan's dependency structure has been increasing over the last few years, more and more people are getting employed for low-skilled jobs. Trade barriers and small export base is a hindrance for growth in services. Policy makers need to address issues and reform policies that could increase the contribution of service sector. There is a progressive scope for this sector to grow and bring benefits to the whole economy.

1. Introduction

Service sector is an integral wheel of growth and development for the global economy. Services are becoming more and more important for country's development, which also include achieving the Millennium Development Goals (MDG'S), such as poverty reduction and access to basic services, education, and water and health services. Service sector has become a major contributor of growth to the global economy. It accounts two-third of world Gross domestic product

(Zeb, 2017). One of the main characteristics of a developed nation includes more service-dominated economy, whereas less developed nations are more employed in agriculture and mining (Jalil, 2016). Service sector is the fastest growing sector with an increasing percentage of employment and total productivity. Service sector in low-income countries produces annually 47 percent of share in GDP, 53 percent in middle-income countries and 73 percent in high income countries. The GDP share of service sector is growing at higher rate which is therefore attracting more foreign direct investment (Ahmed, 2011). Service sector is "heterogeneous", since the activities ranges from capital-intensive to labor intensive. The sector serves intermediate and final demands, produced and used by both: private and public market (Elfering, 1988).

World Bank has shown its clear interest for the growth in service sector to eradicate poverty as compared to other agricultural or industry sector. The 2011 World Development Indicators show that the service sector increased to 71% of overall GDP. The main reasons behind the service sector's significant contribution to GDP is advanced urbanization, growth of public sector, highly increased demand for consumer centered services and intermediate services. The growth of activities in an economy is based on the services that are provided by trade, business activities, banking, insurance, equipment maintenance and to other subsectors of service sector (Soni, 2013). Services are used regularly by the economy from health to education, food to finance investment, travel to entertainment, research and marketing so on. The advancing development of service sector has brought about its significance to the world's economies and economic liberalization is a major reason for the rapid growth of service industry (Singh, 2014).

1.1 Pakistan's Trend in Service Sector

Over the time period, the share of service sector in Pakistan is expanding in all sectors. In fact, the rate with which service sector is developing is higher than the agriculture and industrial sector, contributing 59.6 % to the GDP. The sector gives fundamental contributions to both sectors (agriculture and industry) which explain that it have strong linkages throughout the economy (Government of Pakistan, 2016-2017). In 2012, this sector experienced 5.10 percent but in 2014 this sector saw a major back lag as a lot of factors played role in this cause. The sector saw boost back again in 2015-16, accounting for 5.70 % of growth and finally reaching to 5.98 % growth in 2016-17 (Figure 1).

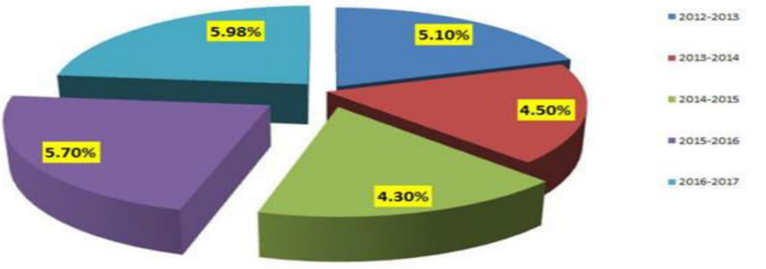

Figure 1 Service sector of Pakistan 2012-2017

Source: Economic Survey of Paksitan, 2016.

Service sector has become one of the most important factors for providing a solid base for the growth and maintaining development in Pakistan. Since 2008, service sector has developed at a high rate. Due to this sector, Pakistan experienced a major change in its structure like the different economies of the world. The total growth contributed by service sector was 58.8 percent in 2014-2015, which increased from the 58.1 percent of GDP in 2013-14. In high-income nations the service's share in final GDP is around 75 percent (Government of Pakistan, 2017).

1.2 Service Sector's Contribution to the Economy:

The service sector of Pakistan contributes almost two-third to the final economic share. Over the last years, Pakistan's economic structure has changed with the significant results, starting from 57.1% of contribution to GDP in 2009-2010 and increasing gradually to 59.6 % in 2016-2017. This sector has become the major contributor for the growth of Pakistan (Table 1).

Table 1 Sectorial Contribution to the GDP

Sector	**2010-11**	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17 P**
Agriculture	21.7	21.6	21.4	21.10	20.7	19.9	19.5
Industry	21.2	21.0	20.3	20.5	20.7	20.9	20.9
Services	57.1	57.4	58.2	58.4	58.6	59.2	59.6

***Source*:** Economic Survey of Pakistan, 2017

The service sector provides employments that are diverse for example, from unskilled to high skilled that includes specialists, manufacturers, and money related experts and beauticians etc. Employment's share in service sector has been developing over the time (Johnston, 2017). In 2009, 2.76 million individuals were utilized in the service sector (Ahmed, 2011). In Pakistan, the unskilled employed workers are 326,765 and highly qualified workers are 16,510 (Government of Pakistan, 2017).

While most literature consider service sector growth and its role in economy as dependent on specific social, economic and structural factors, it can be argued that service sector has evolved in the historical context of Pakistan. Fig 2, depicts the services sector's contribution to overall economic growth in Pakistan increasing over time. Starting from the 'Golden Era', Ayub's policies like green revolution and better industrialization environment was in the favor of agricultural sector and industrial sector of Pakistan which explains a fall in Service sector's contribution to GDP in 1950's. In 1950's, Pakistan's growth was heavily dependent on the crops, and industrial sector was growing. In Ayub's era, Pakistan's had the highest growth in South Asia which declined over the years. One of the main reasons are the policies introduced By Zulfikar Ali Bhutto in his regime. He nationalized all the manufacturing industries, insurance, banking etc. This policy discouraged the foreign investments to cut short, which explains the fall in private sector. Zia-ul-Haq's rule did not uplift the damage of nationalization, though his regime's GDP was mostly because of the large funding like Tarbela dam, and foreign aid and remittances. By 1990's there is a major shift in Service sector's contribution to GDP (fig 2). From 1990's-2005, Pakistan's IT and telecommunication sector started to grow given to the privatization and growth of commercial banking. Economic liberalization policies helped Pakistan's economy to grow with the rest of the world.

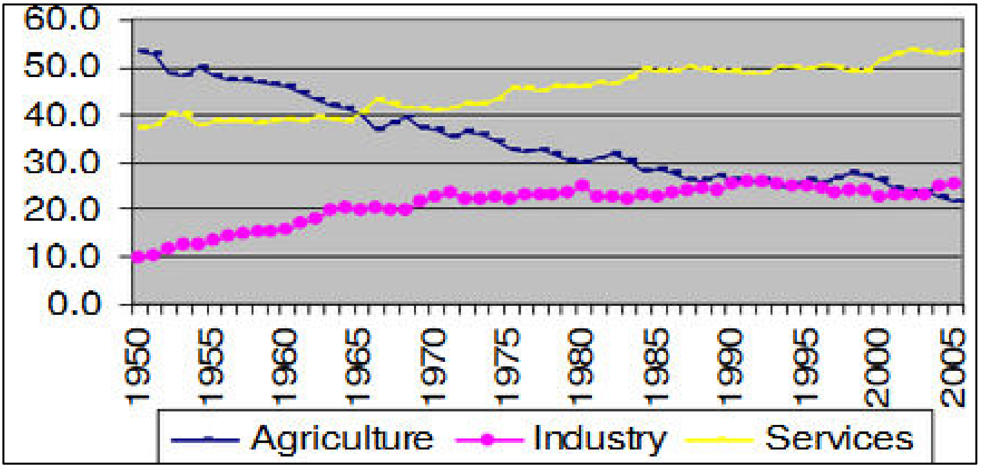

Figure 2Sectorial Share in GDP
Source: Economic Survey, Various Issues.

The objectives of the study are:

- To examine the pattern of service sector's contribution to GDP in Pakistan.
- To find out the relative importance of factors affecting the service sector's contribution to GDP in Pakistan.
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Rationale & Significance

Since the beginning of time, civilization has evolved its turns to progress, first it was agricultural sector for one's needs, then industry sector and now the world has moved to the third; Service Sector. Services sector provides 69 percent of total global output and a total of 35 percent to global employment. This sector plays an important role in the progress of an economy and affects the economy in a positive way. The study's focal zoom is to unveil the factors affecting the service sector contribution in Pakistan, as this sector adds into GDP contributing 59.6 % (Economic survey, 2017). The time span for the study's data analysis is 1990-2017. The variables in this study will explore the relationship as well as the direction of their effect. Significance of this paper lies with the fact that not much studies are being done of this manner, as this paper highlights the importance of service sector and how the progress of this sector brings economic development. Service sector reveals so much about any country's growth, the better this sector is, the better the international opportunities. This paper will guide the policy analysts to focus on factors that may or may not be impacting service sector's contribution to GDP, and design better policies to help the sector to grow effectively

2. Literature Review

Agostino (2006) examined the employment's role in service sector of the European nations from 1970 to 2003, using panel data. Least Square methodology was applied, results demonstrated that wage, and private utilization and profitability are the fundamental determinants of the US and European nation's service sector's final employment contribution. Ajmair (2011) analyzed the determinants behind the service sector's contribution to GDP in Pakistan for the year 1990-2005. The time period of the study highlights the major growth in this sector due to the advancement in communication, business, and information technology and community services. The paper shows that the employment rate in this sector grew at a stable rate. The demand for services increased since 1990, as well as household consumption and exports in services. Pakistan's supply side determinants like technological advances and reforms also played a major role in the sector's contribution to GDP. Cinyabuhuma (2017) explained that the Senegalese's economy accounted 66 % of service sector's contribution to the annual growth for the time period of 2006-2013. According to the study, private services especially financial and telecommunications services provided 48% of total growth to services. Employment played an important role in services by providing 55% of total work force which was more concentrated in urban areas as compared to rural areas.Cross country analysis revealed that economies go through structural transformation. In the first phase of transformation, farming (agricultural) sector's contribution starts to decline and this is compensated with an equal increase in industrial sector while the service sector's share in growth stays constant. The second phase shows the substitution among service sector and industrial sector, in second phase agribusiness stays steady. On the agriculture sector's expense, the service sector grows (Baig, 2012).

Gordon (2003) analyzed the factors influencing Indian service sector's development from 1952 to 2000. The paper explained the expansion in the service development in 1990s was because of communication service's development, business, financial and network sector. For analysis, ordinary least square method was used; the outcomes demonstrated that foreign exchange, and trade liberalization has positive impact on service sector development in India. The paper additionally explained the significance of employment in service's sector, which has been increasing. Isahmi (2012) explained that the growth in the service sector is due to the advancement in data innovation, community service, IT services and consumption. The paper used secondary data from the time period of 1990-2010; simple regression was applied for the panel data. The findings of the paper suggested that Indian economy has a potential in export services and consumption effects positively. Khan (2017) studied government expenditure's effect on the private investment and service sector contribution for the time period of 1995-2014. The study did panel analysis for the Asian countries: China, Pakistan, Bangladesh and India. The results depicted that variables as, social and infrastructure development has a positive and significant effect on private investment. Agriculture and health effect negatively whereas total debts and education have no effect. Mujahid (2014) studied the determinants of service sector for example, external debt, population, total national output per capita, foreign direct investment and government expenditure and employment in service. Co-integration and vector error adjustment (VAR) method was applied to demonstrate the results for long and short run relationship among factors individually, for the time period of 1976-2010. Results suggested that there is an impact of population, foreign direct investment, government consumption on the service sector's development in Pakistan.Mukherjee (2013) explained that service sector is growing with a higher rate in India, even this sector has the largest labor productivity yet the employment generation is not effective. The jobs that are being created didn't keep up with the pace this sector is growing. India's exports in service are not significant for the growth due to its concentration to few markets only. The paper also pointed out that Indian economy's cost of providing services is higher as its infrastructure is weak. India's economy has restrictions over foreign direct investment which acts as a negative factor. Education and health services are inadequate and poor people don't have easy access. Singh (2014) applied vector autoregressive analysis (VAR) for the variables: trade, internal investment, FDI and GNP per capita from 2000-2013. The results depicted these determinants to be relevant for the service sector contribution to Indian economic growth. The study shows that service's sector share in GDP is increasing from last few years; one reason is GNP per capita. Service sector is also attracting FDI in construction, hotel and telecommunication which are helping Indian's economy growth.

The research questions of this study are:

- What is the pattern of service sector's contribution to GDP in Pakistan?
- What are the key factors of service sector's contribution to GDP in Pakistan's economy?
- To what extent the service sector's contribution to GDP is affected by these factors?

3. Methodology

3.1 Data

This study uses a longitudinal design employing panel data of 27 years. The investigation for this study is done through secondary time-series analysis. Data has been taken from reliable source i.e. World Bank to proceed for software computation. The first step would be to check variable stationarity before defining the test to be run for this study. The software used for analysis is Eviews 10, since this software caters all the needs of this study.

3.2 Model

Factors affecting service sector's contribution to GDP are diverse, as this sector is vast in its own nature. For this study's analysis piles of literature has been done to figure out the factors that can affect the service sector's contribution to GDP.Through intensive literature review, this study would take the Research Equation as follows:

$$Y = ß_0 + ß_1 \text{ HCON} + ß_2 \text{ FDI} + ß_3 \text{ GCE} + ß_4 T + ß_5 \text{ POP} + ß_6 \text{ E} \rightarrow \text{(H)}$$

Where, in equation (H)

Y = Service Sector contribution to GDP → Dependent Variable

HCON= Household final consumption expenditure → Independent Variable

FDI= Foreign Direct Investment (Inflows) → Independent Variable

GCE= Government Consumption Expenditure → Independent Variable

T= Trade (in service) → Independent Variable

E= Employment (in service) → Independent Variable

POP= Population growth → Independent Variable

4. Results

In this study Service sector's contribution to GDP is the dependent variable and the independent variables are: employment in services, government consumption expenditure, foreign direct investment, population, trade in services and household final consumption expenditure. Simple regression, Ordinary least square (OLS) method can be used only if there is no UNIT ROOT in the variables. But if variables have unit root problem, then other methods are to be used. A method, ARDL (Autoregressive Distributed Lag) was introduced by Pesaran et al. (2001) which caters the mix of variables integrated of I(0) and I (1). ARDL has certain set of rules:

1. The variables must be a mix of I (0) and I (1)
2. The dependent variable must be non-stationary I (1)
3. ARDL strategy is inapplicable in the region of I (2)

So before testing the effect of independent variables on dependent variable, ADF (Augmented Dickey Fuller) test is used to check unit-root of the variables. Trade and Population growth are integrated of order I(0) whereas, Service, Household final consumption expenditure, employment, foreign direct investment and Government consumption expenditure are integrated of order I(1). Therefore ARDL technique could be used for the purpose of estimation. Unit root test is tested on the basis of Probability value, if $P < 0.05$, unit root does not exist. The value of R-square is 0.99 means that 99% of the variation in the dependent variable i.e. Service sector (% GDP) is explained by household final consumption expenditure, employment in service, trade in service, population growth, government consumption expenditure and foreign direct investment. Therefore, the formulated model of the study is statistically significant. The value of adjusted R square in this model is 0.98, which is lesser than the value of R square i.e. 0.99. Moreover, this value of R square is closer to 1, so the model is a good fit. There is no Heteroskedasticity and no serial correlation in the model.

Error Correction Model

The coefficient of ECM (Error correction model) is less than 1 i.e. -1.18, implying that deviation from long-term state would be corrected by 118% in the following year. Highly significant ECM term further confirms the existence of a stable long-run relationship among variables with their various significant lags (Banerjee et. al, 1998). ECM explains that the change in dependent variable is a sum of two components. First, that the current change in dependent variable is proportional to the current change independent variables. Second, that the ECM value depicts the speed by which the dependent variable would revert back to equilibrium after experiencing disequilibrium in independent variables.

4.1 Long-run results

Table 2 ARDL Co integrating and Long-Run Form

Dependent Variable: Service Sector's Contribution to GDP Method: ARDL Cointegrating And Long Run form Sample : 1990-2017			
Variable	**Coefficient**	**t-Statistic**	**Prob.**
Population growth	-13.73560	-8.002631	0.0000
Household final Consumption	0.207501	2.251771	0.0509
Employment in services	- 0.880818	-5.158087	0.0006
Government consumption expenditure	0.155842	1.553105	0.1548
Trade in services	0.360491	2.701235	0.0243
Foreign Direct Investment	0.558183	2.986559	0.0153
C	105.79	3.770783	0.0044
CointEq(-1)	-1.18	-11.10101	0.000

4. DISCUSSION

The research purports to explain the factors determining/ affecting the service sector's contribution to GDP. This paper used Household consumption expenditure, government consumption expenditure, and trade in services, employment in services, foreign direct investment and population growth for the years 1990-2017. The ARDL-test result shows positive and negative effect of independent variables on service sector's contribution to GDP. Independent variables: Employment, trade in services, foreign direct investment and population growth have significant long run impact on service sector, whereas household consumption expenditure and government consumption expenditure have an insignificant effect in the long run. Service sector is increasing at a rate which is still lower as compared to other countries, but from last few years the contribution to GDP has increased to new levels. Currently, it provides more than 50 percent into the gross national income of Pakistan. The service sector share is expanding in every division of the nation and now it provides 33% of total employment. It also gives fundamental contribution to the manufacturing and agricultural sector **(Baig, 2012)**.

Since the service sector caters unskilled employed person to a skilled and educated employed person, the variation of jobs in this sector is more than any other sector. Employment in services is increasing from last few years now, currently providing 35% of overall Pakistan's total employment which is positive but not sufficient for the service sector contribution to GDP. Employment in service sector normally has a tendency to be less formal. The ARDL long run results depict negative but significant effect of employment on service sector. In numerous service subsectors the employment particularly at starting levels, requires low skills for such jobs and a lot of these occupations don't change with time and thus don't offer a profession to participants. Such low entry hindrances to these employments encourage the acceptance of youngsters into these occupations, when they have not much education or potential skills. High-profit occupations (specialists, dental specialists, legal advisors, medical attendants) normally require an intensive knowledge and experience which explains why there are less people registered under high-skilled employment in Pakistan **(Bari, 2017)**.

Trade is a major indicator for growth and development. The reason for Pakistan to fall behind in trade services is the restricted export base, and generous dependence onto material and textile, which is 66% of the total exports. Export prices in Rupees expanded by 250 percent from 1991 to 2008, showing a yearly of 7.7 percent increase. In dollar terms the yearly increment was 1.4 percent, though import prices in Rupees expanded by 532 percent with a yearly increment of 11.5 percent. Given the present circumstance it can be seen how Pakistan's trade is affected. Export proportion did increase yet the income from exports is not as high as it ought to be (Fatima, 2010). Trade in services can increase domestic progress as well as employment in service sector. Trade export ratio must be higher than the import ratio to reap benefits (Mukherjee, 2013). Export base of Pakistan increased in Ayub's era, one reason was not devaluing the currency. Raw materials were

heavily exported, but now in the global age of technology raw materials cannot be the only major factor of export base. The ARDL results for Trade are positive and significant in the long-run can be explained given Pakistan's situation. But still around the world, trade in services is expanding the pace but in Pakistan the growth is slower given to its trade policies and base.
the format for all resulting family planning policies. For some countries it can be beneficial but for Pakistan increasing population growth is hazardous. The dependency ratio would increase and there will be less bread and more mouths to feed for. The increase in population growth triggers long lasting impacts on the overall economy's performance. More population and not enough services to consume can make situation worse. Increase in service sector contribution to GDP can decrease poverty as well as population growth. Working-group from population can be absorbed in service sector (Park, 2013). The ARDL results depict negative effect of population growth on service sector's contribution to GDP. Government expenditure helps any economy to stabilize its growth. In Pakistan's case, increased government expenditure can help the growth of service sector and overall performance of the country. Government make expenditures with the tax generated revenues. The ARDL long-run result for Government consumption expenditure can effect positively but insignificant in the long run. Pakistan's government needs to provide better health and education services, so that it can be easily accessible to lower income class. Household consumption expenditure (long-run) impacts the service sector's contribution to GDP positively. A possibility for lower consumption rates or insignificant results can be the supply side (Fouladi, 2016). Less supply of services can affect the demand for consumption that can lead to negative results. For Pakistan to take total benefit from consumption side, it needs to grow and fulfill the needs of services else the consumption side will tend to grow negatively. Housing services can be made better as well as social sectors such as education and health sector.

In 2010, service sector recorded 268 billion US$ of FDI in developed economies, while Asia and Africa just got 9 billion US$. Developed economies kept up a development rate of 2% by 2012 though; developing economies demonstrated a development rate of 4%. These development rates show that the FDI has enhanced the abilities in developing economies. FDI inflows in Pakistan's service sector are higher as compared to other sectors. In 2012, the financial sector had resources of 10 billion rupees. Oil and gas investigation received FDI of 570 million US$ and from last seven years IT sector has received 12 billion US$ of investment (Dar, 2016)Small-and medium- sized enterprises faces the major competition at international markets, advanced technology and innovation can help them grow (Hofer, 2018). Foreign direct investment helped Pakistan's economy after Zulfikar A. Bhutto's regime of nationalization.Pakistan is also attracting Multinational Enterprises through promoting investor-friendly policies. Pakistan is encouraging foreign investors to increase their capital and reap benefits..The ARDL result for FDI in Pakistan is significant over long-run and it can be predicted that the effect will increase with growing better policies to attract more and more foreign investors in the economy.

Conclusion

The prime focus of this research paper has been to explain the factors affecting the service sector's **contribution to GDP** in Pakistan. The paper employed factors like: household consumption expenditure, government consumption expenditure, foreign direct investment, and trade in services, population growth and employment in service to analyze their effect on the service sector's contribution. The data from year 1990-2017 has been used for analysis. Since the data is time-series panel data, unit root was checked before applying ARDL-equation. The result depicts significant effects except for household consumption expenditure and government expenditure whereas; trade in services, population growth, employment and foreign direct investment is significant but population growth and employment effects negatively. The pattern of Service sector's contribution to GDP is positive and increasing, providing 59.6 in GDP **(Government of Pakistan, 2016-2017)** but still the contribution is lower as compared to developing economies such as India, China. It can be predicted that the following years would bring more progress to service sector, as foreign direct investment is increasing. But Pakistan needs to address its issues such as population growth and other socio-economic and political issues. The following precise conclusions and policy recommendations can be drawn from this study:

1. **Reducing entry barriers to foreign direct investment**: Foreign direct investment is the injection that can help any economy to progress. Effective checks over the investment and its expenditure can help service sector as well as the overall development. Productive Incentives for the foreign investors should be provided, so they can increase and reap benefits from their capital.
2. **Better foreign trade policies:**Low restrictions on trade and expansion of export base can help Pakistan's trade service sector to flourish and develop. To compete in international markets, Pakistan's services must develop and evolve with the innovation and technology. Increased services trade would lead to wide distribution of benefits to the economy. Improving law and order conditions and enforcement of contractual law will encourage FDI that will in turn bring in higher volume of value added services. This could yet be another way of increasing employment for a well-trained youth.
3. **Increase Investment:** Government must increase investment in Information computational technology, Research and development, infrastructure and long term projects that would help the economy. Investment in human development including social sectors such as

education and health are most needed in Pakistan. Better dynamic business environment is also needed.

4. **Public Services:** A major part of consumption is spent on services but in Pakistan services that are provided are neither efficient nor sufficient especially health and education services. These services would not only increase sector's contribution but also develop the economy as a whole, so public policy for youth development should focus on education and training of young people in value added services.
5. **Job Prospectus:** In Pakistan, the ratio of unskilled workers is high but they are earning low income. Policy makers need to improve the job prospects of low-skilled workers by providing low cost skills development programs and reforming labor market. Decreasing public ownership in competitive market can also help for service employment opportunities to flourish.
6. **Control over Population:** Pakistan needs to control its population growth. The government can present motivating forces for the couples that in the event of having a small family (2-3 kids), advantages will be provided to the family for example, paying for their educational expenses till secondary education and free health concessions etc.

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