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# Editorial

by Gurumurthy Kalyanaram

## The Negative Effects of Social Capital in Organizations: A Review and Extension

by Gurumurthy Kalyanaram

In this issue, we are reproducing the introductory section of an important research article, *The Negative Effects of Social Capital in Organizations: A Review and Extension*, by Pillai, Hodgkinson, Kalyanaram and Nair published in *International Journal of Management Reviews* (DOI:10.1111/ijmr.12085). This manuscript offers many opportunities for further research and reflection. Accordingly, we are presenting part of this manuscript.

**Pillai, Hodgkinson, Kalyanaram and Nair (2015), "The Negative Effects of Social Capital in Organizations: A Review and Extension," in *International Journal of Management Reviews* (DOI:10.1111/ijmr.12085).**

**This paper was one of the top five cited IJMR papers from 2017.**

### Abstract

Numerous studies have examined the positive effects of social capital in organizations, whereas the possible negative effects have attracted considerably less scholarly attention. To rectify this imbalance, this paper first undertakes a rigorous review of the published scholarly empirical evidence pertaining to the negative effects of social capital in organizations through a search of Web of Knowledge and Scopus, and then enumerates six potentially negative effects arising from increased levels of social capital. Our analysis focuses on negative effects arising from bonding social capital and those arising from dense networks and closure, advancing new theory to elucidate the generative mechanisms that give rise to the proposed negative effects. Finally, we identify potential moderators of the negative effects thus theorized. Using the lens of social identification theory, we argue that dysfunctional identification processes restrict the processing of information and stimulate over commitment to established relationships, diluting in turn the dialectical process, and inhibiting individual learning within organizations, culminating in groupthink, the postponement of structural adjustments, the non-rational escalation of commitment, and the blurring of firms' boundaries. Our analysis thus furthers the agenda of a more balanced inquiry into the effects of social capital in organizations.

### Introduction

The notion of social capital (SC), first introduced by Coleman (1988), has attracted significant scholarly attention in recent years. The core insight of this body of work is that networks of relationships and connections constitute an important resource for the conduct of social affairs (Burt 1997; Kostova and Roth 2003; Nahapiet and Ghoshal 1998; Portes 1998; Uzzi 1996), affording their members, "collectivity-owned capital, a "credential" which entitles them to credit, in the various senses of the word" (Bourdieu 1986: 249). An impressive volume of evidence supports SC theory's central predictions (for recent overviews, see Kwon and Adler, 2014; Lee 2009; Portes and Vickstrom, 2011). Inter alia, higher levels of SC have been associated with: (a) greater career success and executive compensation (Belliveau, O'Reilly, and Wade 1996), (b) knowledge access, inter-unit resource exchange, and product innovation (Huggins 2010; Maurer, Bartsch, and Ebers 2011; Pittaway et al. 2004; Tsai and Ghosal 1998; Zheng 2010) and intellectual capital creation (Nahapiet and Ghoshal 1998), (c) the effectiveness of workgroups (Oh, Chung, and Labianca 2004), and (d) superior managerial (Moran 2005) and organizational (Acquaah 2007; Batjargal 2003) performance.

These achievements notwithstanding, the central message of this paper is that the contribution of SC theory to the analysis of behavior in organizations needs rethinking; for in parallel to the above advances, scholars have also identified a number of potentially serious negative effects (see, e.g., Adler and Kwon 2002; Kwon and Adler, 2014; Locke 1999). However, this antithetical work has lacked theoretical depth, relative to the substantial body of work examining the positive effects of SC. Accordingly, in this paper we set out to advance a more balanced account of SC, through a deeper consideration of its potential negative effects within and between organizations. Our analysis identifies six such effects, namely: (1) dilution of the dialectical process, (2) the inhibition of individual learning, (3) groupthink, (4) the postponement of structural adjustments, (5) the non-rational escalation of commitment, and (6) the blurring of firms' boundaries. We maintain that these negative effects arise from fundamental (dysfunctional) processes of social identification (Ashforth and Mael, 1989), restricting in turn the processing of new information by directing attention inward to selected aspects of the information environment. Our analysis thus deepens understanding of the generative mechanisms underpinning the potentially deleterious consequences of SC for organizations and in so doing, responds to recent calls to deepen understanding of the processes underpinning its development (Jordan and Munasib, 2006).

For the purposes of this review, we adopt Inkpen and Tsang's (2005, p. 151) definition of SC: "[the] aggregate of resources embedded within, available through, and derived from, the network of relationships possessed by an individual or organization." Within the confines of this definition, SC is characterized by a number of attributes, which, following Nahapiet and Ghoshal (1998), can be analyzed conveniently along three major dimensions, reflecting its structural, relational, and cognitive properties. The structural dimension refers to the overall pattern of connections among a given group of actors (Nahapiet and Ghoshal 1998). The relational dimension, in contrast, distinguishes the varieties of personal relationships identified by researchers and comprises trust, reciprocity, expectations, and obligations (Lee 2009; Nahapiet and Ghoshal 1998; Tsai and Ghoshal 1998). The cognitive dimension differentiates the resources that variously provide, "shared representations, interpretations, and systems of meaning among parties" (Nahapiet and Ghoshal 1998, p. 244). The bulk of recent work on SC in organization studies has been based on this three dimensional conceptualization (see, e.g., Inkpen and Tsang 2005; Tsai and Ghoshal 1998).

Scholars addressing the structural dimension distinguish the notions of closure (Coleman 1990) and structural holes (Burt 1992), highlighting respectively the value of close ties and interconnections among actors (often measured as network density) and the brokerage benefits derived from the bridging of gaps in the focal network. In a similar vein, Putnam (2000) distinguishes between bonding and bridging SC, the former referring to ties among actors who are members of the focal network, the latter to ties that interconnect actors from otherwise separate networks.

Recent research has sought to reconcile these differing views by demonstrating that the closure and structural holes perspectives are complementary and the benefits arising from the membership of dense networks are enhanced in the context of seeking to bridge structural holes (Rost 2011). In this review, however, we focus on the negative effects arising from dense networks and closure. Hence, we do not address the structural holes perspective. In terms of Putnam's (2000) distinction between bridging and bonding SC, our focus is mainly on the latter. Higher levels of SC, as used subsequently in this paper, imply greater density and closure.

Prior research has documented evidence of a series of 'dark side' effects (e.g. Edelman et al. 2004; Locke 1999; Tura and Harmaakorpi 2005; Westlund and Bolton 2003) and several alternative perspectives, reviewed in the next section, have been advanced to account for them. Like Jordan and Munasib (2006), we maintain that the underlying processes that manifest these effects need better explication and we further this agenda using the lens of social identification theory (Ashforth and Mael 1989).

Social identification is said to occur whenever actors internalize a particular social identity; it entails the perception of being psychologically intertwined with the fate of the pertinent social unit(s) (e.g. group, organization, profession, industry, and/or country) with which the actor identifies (Ashforth and Mael 1989). Social identification promotes self-definition in terms of the social unit of identification (cf. Ashforth and Mael 1989). Identity researchers have conjectured that social identification can be thought of as a particularly potent form of SC (Haslam, Eggins, and Reynolds 2003). SC theorists have observed that social identification is an important facet of relational SC (Nahapiet and Ghoshal 1998). Frequent interactions and being embedded in a dense, high closure network can also facilitate identification processes (Ibarra, Kilduff, and Tsai 2005). Potentially, therefore, all three dimensions of SC (structural, relational, and cognitive) are underpinned by social identification processes.

Social identification theory is an especially attractive lens through which to examine dark side effects because it explicates clear bridging mechanisms that interconnect individuals and social structures (cf. Haslam, Eggins, and Reynolds 2003; Maghrabi, Oakley, and Nemat, 2013; Jensen and Jetten, 2015), an issue that requires more attention in the SC literature (Ibarra, Kilduff, and Tsai 2005; Kilduff and Krackhardt 1994). We maintain that social identification is the main generative mechanism that ties together the various negative effects highlighted in our review, directing actors' attention and restricting the processing and acceptance of potentially novel insights that would otherwise stymie those effects. Extant accounts have focused selectively on particular negative effects addressed in our review, treating them in a relatively superficial and disparate fashion rather than incorporating them into a more unified and integrated account of the sort attempted in the present paper.

**Dr. Gurumurthy Kalyanaram:** Editor, and Visiting Professor and former Dean, Research, NMIMS University.

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# Trade Liberalization and Inequality: Re-examining Theory and Empirical Evidence

SIMRAN SETHI

## Abstract

This paper re-examines the theoretical and empirical evidence regarding the impact of trade liberalization on income inequality and attempts to identify areas for future research. Since the 1980s, there has been a rise in inequality in both the developed and developing world. This was also the time when many developing countries liberalised their trade regimes, which resulted in an increase in flow of goods and services, and capital and labour flows. Economists argue that trade based on factor proportions theory cannot account for the increasing wage inequality since the 1980s. Through this paper, the author has examined the theory as well as several recent studies that indicate a potential role of international trade in affecting wage inequality that operates through channels other than the Stolper–Samuelson type effects - New trade theory, residual wage inequality, industry wage premiums, skill biased technological change (SBTC), global product sharing and New new trade theories (heterogeneous firms). The main question is - how to isolate the effects of trade from other simultaneous changes in the economic environment that may have induced shifts in the relative demand and supply of skilled labour. Further research needs to be done on how important are these new channels relative to SBTC in explaining growing inequality in these countries. The study can be further extended to include not only the impact of international trade, but also the effect of financial globalization on inequality.

**Keywords:** *Trade Liberalization, Inequality, New Trade Theory, New New Trade Theories*

## Introduction

One of the resilient trends has been a rise in within-country inequality in a number of countries. This rise in inequality, whether measured in terms of income, wages or assets, has been observed in both the developed and developing worlds (Norris, Kochhar, Suphaphiphat, Ricka & Tsounta, 2015). One possible reason for this rising inequality is trade liberalization. Many developing countries initially chose a strategy of import substitution as a means of industrializing. Since the 1980s, many countries have moved towards global economic integration, and in particular, trade liberalization, as a development strategy. Trade between developed and developing countries has increased tremendously; because of the increasing integration, income distribution is also changing across countries. One of the viewpoints is that since then, many countries have experienced increase in inequality. On the other side, many studies also indicate that trade liberalization in developing countries has raised their aggregate incomes and reduced inequality. One of the major points in favour of trade is that it promotes efficiency. However, theoretically and empirically, trade not only affects economic growth, but has strong effects on distribution of income. This has led to a large debate between policy makers and economists on whether trade liberalization is one of the reasons for rising inequality within countries. The main argument is - to what extent growth in inequality can be attributed to trade liberalization.

The motivation behind the study stems from widening income inequality in developed countries, emerging markets and developing countries, especially since the 1970s. An IMF study by Norris, et al., (2015) shows that income inequality matters for growth and its sustainability. Specifically, if the income share of the top 20 percent (the rich) increases, then GDP growth actually declines over the medium term, indicating that the benefits do not reach the poor. In contrast, an increase in the income share of the bottom 20 percent (the poor) is associated with higher GDP growth. Inequality matters as it may signify lack of income mobility and opportunity—a reflection of persistent disadvantage for particular segments of the society. It also has a significant impact on macroeconomic stability as it can lead to concentration of economic and political power in the hands of few. It could also lead to under-utilization of resources, lower investment and economic growth, and cause political,

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economic and financial instability. According to Ravallion, high inequality also implies that growth is less efficient in reducing poverty in such countries (Norris, et al., 2015). The period of rising inequality also coincided with the period of greater economic integration through increase in trade in goods and services, capital and labour across countries. Hence, the main argument is - to what extent globalization has contributed to this increase in inequality. The experience of East Asian economies is consistent with the predictions of the model, as inequality declined in these countries after the 1960s and 1970s as these countries liberalised their trade regimes. However, in the 1980s, wage inequality rose as these countries (mainly Latin American countries) moved towards trade liberalization. This finding is clearly contrary to the predictions of the traditional theory of international trade. The main explanation used is the skilled biased technological change incorporated in trade liberalization, which favours the wages of skilled workers in North and South countries. The objective of this paper is to review the existing theory and empirical evidence on the impact of trade liberalization on inequality as well as identify research gaps and find topics for future research.

The rest of the paper is structured as follows. Section II presents theoretical background. The next section covers the literature review, followed by scope for further research. Section V concludes.

## Theoretical Background

The standard theory of trade emphasizes the impact of trade on wage inequality between occupations and sectors. In the specific factors model, one or more of the factors of production is immobile between industries and hence, it helps in analyzing short term consequences of trade. The main prediction of the model is that trade benefits the factor that is specific to the export sector of each country, but hurts the factor that is specific to the import competing sectors and has an ambiguous effect on the mobile factor. In the Heckscher Ohlin (H-O) model (Krugman, Obstfeld & Melitz, 2015) trade is based on the assumption that all countries have identical technology, but differ in relative abundance of factors of production. The Samuelson Theorem extends the H-O model by linking product prices with factor prices. This effect indicates that for a given level of technology, trade and wages are linked through the changes in relative prices of skilled and unskilled labour-intensive products. An increase in the relative price of the good is predicted to increase the real return to the factor used intensively in the production of that good, and decrease the real return to the other factor. Consequently, one of the major implications of the Stolper Samuelson theorem is that trade will lower the price of the import competing good and hence, lower the real return to the scarce factor of production. Therefore, according to the H-O model with two factors - skilled and unskilled labour, developing countries will tend to export goods intensive in unskilled labour and developed countries will tend to export goods intensive in skilled labour; hence, wages of the unskilled labour should go up in the developing countries and wages of the skilled labour should increase in the developed countries. Hence, the model predicts that wage inequality increases in the developed world, and decreases in developing and emerging countries since in developing countries, unskilled labour would benefit the most from globalization. The empirical evidence gives mixed results.

The experience of the East Asian newly-industrialised economies was a reduction in wage inequality after openness was introduced in the 1960s and 1970s. This was therefore consistent with "standard" trade theory which predicts that trade liberalisation should benefit the locally abundant factor (Wood 1997). However, this evidence has been challenged by a number of studies for countries that opened up to trade more recently, mostly for Latin American countries where inequality has risen as these countries moved towards trade liberalization. Thus, the evidence on trade liberalisation, which has taken place in the last two decades (mainly, Latin America, but also includes other countries like India and China) indicates a positive relationship between trade liberalisation and wage inequality (Goldberg & Pavcnik, 2007; Topalova, 2005). They argue that this finding is clearly contrary to the predictions of the traditional theory of international trade. There are various theories that explain the rising inequality following liberalization. For example, New Trade Theory (NTT) as explained by Krugman et al. (2015) suggests that the vital factors in determining international patterns of trade are the very substantial economies of scale and network effects that can occur in key industries. These economies of scale and network effects can be so significant that they outweigh the more traditional theory of comparative advantage. Another element of new trade theory is that firms that have the advantage of being an early entrant can become dominant firms in the market. This is because the first firms gain substantial economies of scale, meaning that new firms can't compete against the incumbent firms. This means that in these global industries with very large economies of scale, there is likely to be limited competition, with the market dominated by early firms who entered, leading to a form of monopolistic competition. Therefore, NTT suggests that trade could reduce wages of the unskilled labour in a labour abundant country, thereby increasing the gap between the rich and poor.

Goldberg & Pavcni (2007) and Hanson & Harrison (1999) argue that trade in final goods based on factor proportions theory cannot account for the increases in growing wage inequality since the 1980s. Instead, skilled biased technological change

(SBTC) was the dominant driving force in the growth in inequality. Trade can indirectly affect inequality through this channel if technological change was itself an endogenous response to more “openness”; this implies that the trade reforms were indirectly responsible for the increase in the skill premium. The hypothesis of “defensive innovation” by Woods (1995) explains how intensified competition from abroad may induce firms to engage in R&D, or at a minimum, take advantage of existing new technologies that they may have had little incentive to adopt prior to liberalization. Acemoglu (2003) explains another mechanism through which trade liberalization can accelerate SBTC, that is, through a model of endogenous technological change. According to him, technological change in developing countries may take the form of increased imports of machines, office equipment and other capital goods that are complementary to skilled labour. Trade liberalization affects the demand for skilled workers by reducing the prices of the relevant capital goods and hence, increasing their imports. In addition, several recent studies indicate a potential role for international trade in affecting wage inequality via residual wage inequality, which has contributed to growing skill premium in both developed and developing countries (Pavcnik 2011). Residual inequality refers to the recent increases in wage inequality between people with the same observable characteristics. One of the ways in which international trade could affect residual inequality is through industry premiums. Industry wage premiums represent part of the workers' earnings that cannot be explained by worker demographic characteristics (such as education, age, gender, and so on), but can be assignable to workers' industry affiliation. It could reflect industry-specific human capital, industry-specific rents, efficiency wages or compensating differentials. There are various channels through which international trade could affect these industry premiums (Goldberg & Pavcnik 2007). If the industry wage premiums reflect rents that profitable firms in industries with imperfect competition share with the workforce, the elimination of trade barriers could reduce industry wages through increases in product-market competition because of limited labour mobility across industries in developing countries. Another channel through which trade could affect industry wage premiums is labour productivity. The empirical findings indicate greater productivity improvements for industries with larger declines in tariff if firms pass on some of these productivity improvements to workers in the form of higher wages. In that case, declines in industry tariffs would be associated with increases in wage premiums. Therefore, trade liberalization could either increase or decrease industry wage premiums.

Recent empirical evidence also points out that only a minority of highly productive firms within an industry engage in exports. A situation in which Firm A in a given industry exports while Firm B in the same industry does not, cannot be explained by the standard trade model or the New Trade Theory which assumes at least within an industry, representative firms equal in productivity (i.e., firms are qualitatively the same). Melitz & Redding (2012) explain why firms of varying levels of productivity do co-exist through “New New Trade Theories” (NNTT). He describes that in the presence of fixed costs of exporting, initially, only more productive firms select to become exporters and expand, in response to increased export market profitability, while less-productive firms contract. Product quality upgrading is another channel through which trade could increase inequality in developing countries (Pavcnik, 2011). The firms in developing countries must produce higher quality products for their export markets relative to domestic markets because of greater competition in world markets. This, in turn, would tend to increase wage inequality, by increasing wages of workers in more-productive firms relative to the wages of those employed in less-productive firms. Hence, firm heterogeneity is another important channel through which trade affects wage inequality. And lastly, the growing share of trade in intermediate inputs (global product sharing) has also added to the increase in wage inequality by increasing the wage gap between skilled and unskilled workers (Feenstra & Hanson, 1996; Hsieh & Woo, 2005). Research by Feenstra (2008) shows that the divergence of the labour force during the 1990s and 2000s could also be explained by the growing significance of service outsourcing, where low wage countries like India carry out middle-skilled routine tasks. Recently, many non-tradable services have now increasingly become tradable. This has led to growth in imports of business, professional and technical services, typically associated with white-collar jobs in the United States. There is little empirical evidence on how trade in services affects wage inequality. One of the major reasons for this is that data is difficult to measure. Liu and Trefler (2008) investigate the relationship between the effects of offshoring/inshoring on wages in the United States to low-wage countries; their empirical findings suggest very small effects of offshoring/inshoring on wages in the United States.

## Literature Review

There is no clear cut empirical evidence on the relationship between trade liberalization and inequality. Examining the cross country evidence, Gourdon (2011) analyses the cross section data for a large sample of developing countries. It breaks down unskilled labour into two components - non-educated and primary educated workers. The results show that trade liberalization increases inequality in highly educated abundant countries whereas it decreases inequality in primary educated abundant countries. However, it increases inequality in non-educated abundant countries, suggesting that this part of the population does not benefit from trade openness since it is not included in export oriented sectors. Likewise, in another paper, Lee (2014) examines the effects of globalization on inequality and poverty, using cross country regressions. He finds that financial globalization increases income inequality and poverty in general, while there is a conditional relationship between trade

openness and inequality and poverty. Using a sample of 73 countries, Chakrabarti (2000) investigates the empirical validity of the linkage between trade-GDP ratio and Gini coefficient of income inequality. Results indicate a) Increasing amount of participation in trade significantly reduces income inequality b) The strong negative association between trade and inequality does not arise because countries that have a more egalitarian distribution of income for reasons other than trade engage in more trade c) growth provides a channel through which trade lowers inequality by raising both initial income and subsequent growth. Contrary to this, Meschi and Vivarelli (2008) find that technologies transferred from more advanced countries are more skill-intensive with respect to those domestically in use in the developing countries and thus, trade-induced technology upgrading may result in a shift in labour demand in favour of skilled labour, ending in a generalized increase in the skill premium and hence, in a more unequal income distribution. They cover 65 developing countries over the period 1980 to 1999.

In another cross section study, Jaumotte, Lall & Papageorgiou (2013) argue that the observed rise in inequality across both developed and developing countries over the past two decades is largely attributable to the impact of technological change. The contribution of increased globalization to inequality has, in general, been relatively minor because it has two opposing effects on inequality - while increased trade tends to reduce income inequality, foreign direct investment tends to exacerbate it. Both globalization and technological progress tend to increase the relative demand for skills and education. They find that while incomes have increased across all segments of the population in virtually all countries in the sample, incomes of those who already have higher levels of education and skills have risen disproportionately. Gourdon's (2007) empirical findings point out that increase in wage inequality is more due to the South-South trade liberalization than to the classical trade liberalization with northern countries. Most of the South-South trade is in skill intensive sectors, and hence, increase wage inequality for all developing countries. In another paper, Aradhyula, Rahman & Seenivasan (2007) use panel data to analyse the impact of trade on levels and distribution of income. The balanced panel of country level data shows that trade openness increases income, while results using an unbalanced panel data set revealed that trade openness increases income inequality in the overall sample. However, when the sample is split into two groups, trade increases inequality in developing countries but it reduces inequality in developed countries though the coefficient is not statistically significant. Raychaudhuri & De (2010) investigate the inter-linkages and inter-connections among infrastructure, trade openness and income inequality, using panel data of 14 Asia-Pacific countries at different levels of development. The empirical results clearly indicate influence of trade openness and infrastructure on income inequality, but the reverse is not necessarily true. Further, dynamic panel estimates reveal the importance of initial values of both income inequality and trade openness as important determinants in the evolution of these variables, apart from the positive influence of infrastructure as a determining variable.

In individual country studies, Barua & Chakraborty (2010) show that regional inequality in India has been increasing in all components of income except for the primary sector. Their findings indicate a decline in both income and manufacturing inequality since India adopted liberalization policies (1997-98). And the regression results show that trade lessens both income and manufacturing inequalities; however, it increases inequalities in agriculture inter-regionally. There are various studies that provide support for the theory that SBTC was itself an endogenous response to trade liberalization. Attanasio, Goldberg & Pavcnik (2004), in their study on Columbia during 1984-98, show that the increase in demand for skilled workers was largest in those sectors that experienced the largest tariff cuts. Likewise, Robbins & Gindling (1999) investigate the changes in relative wages and in the supply and demand for skilled labour in Costa Rica before and after trade liberalisation. Their empirical results also indicate that the skill premium rose after liberalisation as a result of changes in the structure of labour demand. In another paper, Hanson & Harrison (1999) also examine the changes in both wages and employment of skilled and unskilled workers after trade liberalisation in Mexico. They find little variation in employment levels, but a significant increase in skilled workers' relative wages. They also show that foreign companies and those heavily involved in export markets pay higher wages to skilled labour, which is again consistent with the trade induced skill biased technological change. Another channel through which trade liberalization can induce SBTC is through increased imports of machines, office equipment and other capital goods that are complementary to skilled labour. Hanson & Harrison (1999) investigated this hypothesis for Mexico and found that firms that import machinery and materials are more likely to employ a higher share of white-collar workers than firms that do not import these inputs. Conversely, Pavcnik's (2002) empirical findings on the Chilean plants in the early 1980s shows that increased relative plant demand for white-collar workers cannot be attributed to the use of imported materials and foreign technical assistance to these plants as one controls for the time-invariant plant characteristics.

Empirical studies have also found support for the "global production sharing hypothesis" wherein technology transfer to developing countries through foreign direct investment from developed countries, as well as autonomous technological progress in developing countries tends to narrow the technology gap between developed and developing countries in all sectors. It can partly explain the growing wage gap between skilled and unskilled workers in both developed and developing countries. Hsieh & Woo (2005) show that demand for skilled workers increased in Hong Kong after the relocation of unskilled-

intensive parts of production from Hong Kong to mainland China after China's liberalization of foreign activities in the early 1980s. Likewise, in another study, Feenstra & Hanson (1997) point out to various US plants exporting intermediate inputs to Maquiladora plants (in Mexico) and then assemble these inputs into final goods. This had effects on skill premium in Mexico.

Empirical evidence suggests that trade induced increase in skill premiums cannot fully account for the growing wage inequality. Recent studies indicate that increases in wage inequality are partly driven by increased inequality in wages between people with the same observable characteristics, the so-called residual wage inequality. For example, industry wage premiums could increase or decrease due to trade. Helpman, Itskhoki, Muendler & Redding (2013) use linked employee-employer data for Brazil to study the overall wage inequality that arises within sector-occupations and for workers with similar observable characteristics; this within-component is driven by wage dispersion between firms, which, in turn, is related to firm employment size and trade participation. The empirical results indicate that around two-thirds of overall wage inequality occurs within sector-occupations. Most of this within-sector-occupation inequality is residual wage inequality. Between-firm wage dispersion accounts for a substantial proportion of this residual wage inequality within sectors and occupations. These between-firm differences in wages are systematically but imperfectly related to trade participation: exporters, on average, pay higher wages than non-exporters even after controlling for employment. This is consistent with an increase in the industry wage premiums. Likewise, Kumar & Mishra (2005) evaluate the impact of 1991 trade liberalization on the industry wage structure. Their empirical findings suggest increase in the industry wage premiums in the sectors that employed a larger share of unskilled workers. This is consistent with the liberalization-induced productivity increases at the firm level, which get passed on to industry wages. Their findings indicate reduced wage inequality in India due to trade liberalization. Contrary to this study, Goldberg & Pavcnik, (2005) show that for Columbia, tariff declines were associated with declines in industry wage premiums.

Another mechanism through which trade affects wage inequality is explained by the theory of heterogeneous firms. For example, in the presence of fixed costs of exporting, the initially more-productive firms select to become exporters and expand, in response to increased export market profitability, while less-productive firms contract (Melitz & Redding, 2012). If production for the export market is relatively more skilled-labour intensive than production for the domestic market, increased access to export markets will increase the relative demand for skilled labour and could contribute toward the economy-wide increase in skill premiums. Bernard & Jensen (1997) show that exporting firms tend to be more skilled-labour intensive than non-exporters and this finding has been subsequently confirmed in many other developed and developing countries (Hanson & Harrison, 1999 for Mexico). They further show that much of the increase in within-industry demand for skilled labour is driven by employment shifts across firms, toward exporting firms. In addition, more-productive firms also upgrade product quality and production technology in response to new export opportunities (Verhoogen, 2008). The idea is that firms from developing countries need to produce higher quality products for the export markets than for the domestic markets to appeal to consumers in rich countries. When firms within an industry are heterogeneous and face a fixed cost of exporting, only the most productive firms enter the export market and subsequently upgrade the quality of their products. This, in turn, increases wage inequality. Verhoogen (2008) confirms the predictions of this model with firm-level panel data from Mexico.

Therefore, recent literature suggests that the heterogeneity of earnings across firms might be an important component through which trade influences worker wages. The above evidence suggests that trade in industries with heterogeneous firms could contribute toward increases in wage inequality not only through an increase in skill premiums, but also through an increase in residual wage inequality.

## Scope for further Research

Many studies have analyzed the effect of trade on income and income inequality, but the empirical evidence shows divergent outcomes. The most striking point is that the distributional changes in developing countries went in the opposite direction to the one suggested by the conventional theories of trade. Since developing countries are relatively abundant in less skilled labour, they were expected to gain, but the findings suggest the opposite. What explains this paradox? After reviewing the theoretical and empirical studies on the impact of trade liberalization on inequality, the author has attempted to evaluate reasons why the empirical findings do not confirm to the conventional theories of trade. The channels through which trade affected inequality are country and time specific, and hence, the impact of trade liberalization, must be investigated along with the other policy changes that have taken place in these countries. This makes it difficult to isolate the impact on inequality attributable to trade. A number of mechanisms have been discovered that may have led to increasing inequality due to trade. One of the areas that can be further examined is the impact of "global production sharing" or "outsourcing" on inequality in developing countries. Most of the studies have focussed on trade while excluding this important aspect. Another related area would be to examine the impact of FDI in different sectors, as each sector would have a divergent impact on inequality (Jaumotte et al., 2013). Another related area where more empirical work needs to be done is the effect of trade in services on

inequality. Trade in services has significantly grown as many non-traded services are now increasingly traded. It includes growth in imports of business, professional and technical services. However, there are few studies on how it affects wage inequality. One of the main reasons cited by Jensen (2009) is that trade in services is difficult to measure. Because trade in services is something that will continue to grow in future as well, the impact of trade in services on wage inequality remains a topic for future research. And lastly, one needs to examine the extent to which inequality within a country can be explained by skill biased technological change on one hand and new channels of trade (other than the standard trade theory) on the other hand. One of the major challenges lies in segregating the technology effects from the trade effect in measuring their impact on inequality. And hence, this can be investigated further. This can be further analysed for each sector. The study can be further widened to include not only international trade, but also effects of financial integration on inequality. Most of the studies have concentrated on narrow measures of inequality such as wage inequality; this can be further extended to studies using broader measures of inequality - consumption and income based measures. Another area that can be investigated is the impact of trade on transitional unemployment that affects less skilled workers much more severely than other workers. Another potential area of research is the trade policy and its impact on child labour in developing countries. The opponents argue that, since trade leads to demand for goods and services, it may lead to increase in earning opportunities and hence, to an increase in demand for child labour. On the other hand, proponents are of the view that since trade increases standard of living, this may lead to a fall in demand for child labour.

## Conclusion

There has been an increase in inequality in both developed and developing countries, whether measured in terms of income, wages or assets (Norris, Kochhar, Suphaphiphat, Ricka & Tsounta, 2015). One possible reason for this rising inequality is trade liberalization. Going by the traditional theories of trade, it should have benefitted the relatively abundant factor (less skilled labour) in developing countries. However, the empirical findings show different results. Most of the developing countries experienced an increase in income inequality in following trade liberalization. Through this study, the author has attempted to evaluate the role trade liberalization has played in the increasing inequality experienced by various developing and developed countries since 1980s and means through which globalization affects income inequality - capital flows, SBTC induced by trade, trade in intermediate products, firm heterogeneity and country specific factors. Since different countries liberalized different sectors and at different times, this partially explains the conflicting empirical findings. The experience of the East Asian newly-industrialised economies was a reduction in wage inequality after openness was introduced in the 1960s and 1970s. This was therefore consistent with "standard" trade theory, which predicts that trade liberalisation should benefit the locally abundant factor (Wood 1997). However, Goldberg & Pavcnik (2007) and Topalova (2005) argue that the experience of various Latin American countries as well as countries like China and India has been completely opposite to the predictions of the standard model of trade where inequality has risen as these countries moved towards trade liberalization. Thus, the evidence on trade liberalisation initiated in the last two decades indicates a positive relationship between trade liberalisation and wage inequality. Initially, the increase in skill premium was attributed to Heckscher-Ohlin-Samuelson effect. However, most academicians are of the view that factor proportions theory can't account for the increase in wage inequality since the 1980s (Goldberg & Pavcni, 2007; Hanson & Harrison, 1999). The main reason for the growing inequality was skill biased technological change (SBTC). The main question is - to what extent trade is responsible for increase in wage inequality that operates through channels other than Heckscher-Ohlin-Samuelson effects. The empirical evidence gives mixed results.

According to Pavcnik (2011), one of the channels through which trade could affect wage inequality is residual wage inequality and growing skill premium in both developed and developing countries. Residual inequality refers to the recent increases in wage inequality due to increased inequality in wages between people with the same observable characteristics. One of the ways in which international trade could affect residual inequality is through industry premiums. There are various channels through which international trade could affect these industry premiums (Goldberg and Pavcnik 2007). The elimination of trade barriers could reduce industry wages through increases in product-market competition because of limited labour mobility across industries in developing countries. Another channel through which trade could affect industry wage premiums is labour productivity. The empirical findings indicate greater productivity improvements for industries with larger declines in tariff. In this case, declines in industry tariffs would be associated with increases in wage premiums. Therefore, reduction in tariffs could either increase or decrease industry wage premiums.

The theory of heterogeneous firms (new trade theories) explained by Melitz & Redding (2012), where firms of varying levels of productivity co-exist, explains the differential effects trade has on wages of workers. They state that in the presence of fixed costs of exporting, initially, only more-productive firms decide to become exporters and expand, in response to increased export market profitability, while less-productive firms contract (Krugman, Obstfeld & Melitz, 2015). In addition, product

quality upgrading is another channel through which trade would increase inequality in developing countries (Pavcnik 2011). The firms in developing countries must produce higher quality products for their export markets relative to domestic markets because of greater competition in world markets. This, in turn, would tend to increase wage inequality, by increasing wages of workers in more-productive firms relative to the wages of those employed in less-productive firms. Hence, firm heterogeneity is another important channel through which trade affects wage inequality. And lastly, the growing share of trade in intermediate inputs (global product sharing) has also added to the increase in wage inequality by increasing the wage gap between skilled and unskilled workers (Feenstra & Hanson, 1996; Hsieh & Woo 2005). Feenstra (2008) indicates that the divergence of the labour force during the 1990s and 2000s could also be explained by the growing significance of service outsourcing, where low wage countries like India carry out middle-skilled routine tasks.

The main question is the importance of these new channels of trade relative to SBTC in explaining the growing inequality in developing and developed countries. A study on US by Feenstra & Hanson (1999) indicates that outsourcing accounts for up to 25 per cent of the increase in the relative wages of skilled workers in the United States during the 1980s, while SBTC accounts for 30 per cent. Likewise, Attanasio et al. (2004) find that trade influences residual wage inequality through channels such as industry wage premiums, but trade-induced changes in wages account for a small share of the increase in inequality observed in Colombia during the 1980s and 1990s. A recent IMF study (Jaumotte et al., 2013) investigates the relative importance of international trade globalization, financial globalization and technology for within-country inequality as measured by the Gini coefficient. The empirical findings suggest that the largest contributor to wage inequality is technological progress. The study also shows that trade has reduced inequality, while increased flows of capital across countries have increased it. Therefore, the new channels of trade certainly impact inequality. Further research needs to be done on how important are residual inequality, trade in intermediate inputs and the theory of heterogeneous firms relative to SBTC in explaining growing inequality in developing and developed countries. The study can be widened to include not only international trade but also effects of financial integration on inequality.

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## Appendix

**Table A: Summary of the recent country studies**

Study, Author, Date	Measure of Trade / Openness	Measure of Inequality	Data Description	Identification Strategy	Key Findings
Gourdan (2011)	Adjusted Trade Openness (Hiscox and Kastner)	Gini coefficients	91 countries 1960-2000	OLS, Panel data	-Trade increases inequality in highly educated & non-educated abundant countries -Decreases inequality in primary educated abundant countries
Lee (2014)	Value of export and import divided by GDP, stock of total external assets and liabilities divided by GDP	Gini coefficients, WDI	Cross country, 1976 to 2004	OLS	-Financial globalization increases income inequality -There is conditional relationship between trade openness and inequality
Chakrabarti (2000)	Trade-GDP ratio	Gini coefficients	73 countries, 1985	OLS, Instrument Variable	-Trade reduces inequality
Meschi & Vivarelli (2008)	Total trade -imports and exports as share of GDP	EHHI (estimated household inequality index)- D&S Gini coefficients and UTIP-UNIDO data	65 developing countries (DCs) 1980-1999	Panel data	-Trade with high income countries worsens income distribution in DCs
Jaumotte, Lall & Papageorgiou (2013)	Average tariff rate, non-oil exports and non-oil imports to GDP, Chinn-Ito index	Gini coefficient	51 countries, 1981-2003	Panel data	- Technological progress has a greater impact on inequality than globalization -Trade reduces inequality and financial globalization increases inequality.
Gourdon (2007)	Ratio of shares of trade to north and to south	Wage inequality-standard deviation of log wage	68 developing countries, 1976-2002	Panel data	-The main cause of rising wage inequality is South-South trade liberalization rather than north-south trade
Aradhya, Rahman & Seenivasan (2007)	<b>Total trade -imports and exports as share of GDP</b>	<b>Gini coefficient</b>	<b>60 countries, 1985-1994</b>	<b>Panel data</b>	<b>-Balanced panel data reveals trade increases income</b> <b>-unbalanced panel data shows that trade increases inequality</b>
Raychaudhuri & De (2010)	Trade-GDP ratio	Gini coefficient	14 Asia-Pacific countries 1975-2006	Panel data	-Trade openness affects inequality but the reverse is not true
Barua & Chakraborty (2010)	Trade-GDP ratio, Exports-GDP ratio & Manufacturing trade-GDP ratio	Theil measure	26 Indian states, 1981-2000	OLS	- Trade reduces both income and manufacturing inequality but increases inequalities in agriculture inter regionally
Attanasio, Goldberg & Pavcnik (2004)	Std Deviation log wages - wage 90th decile / wage 10th decile Industry dummies in wage equation	Trade Liberalization by imports and exports in each industry and Industry Tariffs	Columbia, 1984-98	Two stage estimation WLS, Panel data	-Trade Liberalization increase s inequality through increase in demand for skilled workers, and through growing informal sector

Study, Author, Date	Measure of Trade / Openness	Measure of Inequality	Data Description	Identification Strategy	Key Findings
Robbins & Gindling (1999)	Standard Deviation of log wages - wage 90th decile / wage 10th decile	Trade Liberalization by Average Tariff rate	Costa Rica 1974-95	Panel data	-Trade Liberalization and Technological change explains increase in inequality
Hanson & Harrison (1999)	Wage skilled worker / wage unskilled worker	Trade Liberalization by Industry Tariffs rate	Mexico 1984-1990	Panel data	-Wage inequality rises after trade Liberalization, FDI and Technological change.
Pavcnik's (2002)	Tariff, real exchange rate, imports-Output ratio	Wage skilled worker / wage unskilled worker	Chile manufacturing plants 1976-1986	Panel data	-Capital deepening increase s wage premium but adoption of foreign technology has no effect
Hsieh & Woo (2005)	Change in outsourcing in the industry	Change in the wage-bill share of skilled workers in an industry	Hong Kong, 1981-96	OLS	-Increase in demand for skilled workers in Hong Kong (increase in inequality)
Feenstra & Hanson (1997)	Share of imported intermediate inputs in the total purchase of non-energy material.	Relative non production wage share	32 states in Mexico 1975-1988	OLS, Instrument Variable	-FDI increases non producer wages' share; hence, inequality
Kumar & Mishra (2005)	Tariff rate	Industry dummies in wage equation	72 three-digit manufacturing industries (NIC-1987), India 1983-2000	Two stage estimation, WLS	-Tariffs reduction increase wages, since tariff reduction is highest in unskilled worker intensive industries, trade liberalization reduces wage inequality
Goldberg & Pavcnik, (2005)	Industry dummies in wage equation	Trade Liberalization by Industry Tariffs	Columbia 1998	1984- Panel data	-Relative wages declined in sectors with larger tariff reductions, that is, trade liberalization led to reduction in industry rents, and hence, trade increased income inequality.

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# Personality Dimensions as a correlate of Work Engagement: A Study of working women in Indore city

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## Abstract

Work engagement is a vital HR variable for all organizations to sail through in this cut-throat era of competition as engaged employees are brand representatives and help the organization deliver superior performance to gain competitive advantage. Different personality dimensions relate to satisfaction in a particular task (Judge, Heller & Mount, 2002), predict job performance in various types of jobs (Barrick & Mount, 1991), commitment (Erdheim, Wang & Zickar, 2006) and hence, work engagement. These dimensions from the Big Five Model increase or decrease the probability of experiencing a state of engagement at work. This study attempts to understand the influence of personality dimensions of the Big Five Model on work engagement. The study compares the overall personality dimensions and attempts to find particular dimensions of both, personality and work engagement, of married vis-à-vis single working women.

The findings of the study reveal that married working women are more dedicated and engaged, more extroverted, depict more agreeableness and are open to experience. Single working women are more conscientious and stand at par on emotional stability with married women. There exists a correlation between personality and work engagement.

**Keywords:** *Extraversion, Agreeableness, Conscientiousness, Emotional Stability, Openness to experience, The Big Five inventory, Work Engagement, Utrecht Work Engagement Scale.*

## Introduction

### **Conceptual Framework**

Individuals show different levels of engagement at the workplace. Some are highly engaged employees while others demonstrate little or no signs of work engagement while working under similar conditions. The consequences of disengaged employees may cause a huge cost to any business. A survey by Gallup in 2017 reports that 87% of employees worldwide are disengaged.

Many previous research studies have been conducted to study the effect of various organizational variables on work engagement, but research studies on variables like personality impact on work engagement are scarce (Willson, 2009).

### **Personality**

Understanding personality of employees is important because it affects perception, attitude and behaviour. Personality types affect interpersonal relations at the work place. Managers benefit from personality theories, which can be used for feedback to improve, adjust, train and make decisions about employee behaviour.

Researchers believe that in the study of organization behaviour, five-factor model of personality can be of utmost importance. This model is also called as Big Five personality framework (Goldberg, 1981, 1990; Costa and McCrae, 1992; John and Srivastava, 1999) and is a well known model in modern psychology to depict the prominent features of personality.

According to the Big Five Model, personality measures are categorized (Goldberg, 1990; Hogan et al., 1996) and are found to be relevant to different cultures (McCrae & Costa, 1997). Research shows that the Big Five Model has a genetic basis (Digman, 1989) and that personality traits are probably inherited (Jang, Livesley & Vernon, 1996). An impressive body of research supports that five basic dimensions encompass most of the significant variations in human personality. These five dimensions are Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness to Experience (Goldberg, 1990; McCrae & Costa, 1997).

The “big five” is selected not to reflect their intrinsic magnitude, but to highlight that each of the factors is tremendously wide. Each of the five dimensions gives the widest level of abstraction and highlights a greater number of distinct, specific and personality characteristics for an individual (John and Srivastava, 1999). These big five dimensions are present in any measurement of personality (McCrae and John, 1992). They emerge in all cultures, languages and religions (Allik and McCrae, 2004; Heine and Buchtel, 2009; Schmitt et al., 2007) which means these five dimensions or characteristics or traits are universal (McCrae and Costa, 1997). They are for specific cognitive processes and behaviour, subjected to situations wherein the association between the situational personality and behaviour is mediated by cognitive process (Denissen and Penke, 2008; Mischel and Shoda, 1995; Canli, 2008).

An individual's response to situational features and the intensity of the response is shaped by his personality. Social attitudes and behaviour which are internal and are existing due to previous experiences can be explained using the five dimensions of personality (Medland and Hatemi, 2009; Yamagata et al., 2006).

### **Work engagement**

In today's competitive world, survival and prosperity of any organization is certainly a function of healthy and engaged employees (Schaufeli, Baker and Salanova, 2006). To have effective players, companies - apart from recruiting the best talent - should also encourage, stimulate and facilitate employees to apply their full capabilities (Bakker, Albrecht and Leiter, 2011).

Organizations can create an edge over competition by employee work engagement (Bakker, Schaufeli, Leiter, & Taris, 2008). Most notably, employers who are focused on building and maintaining an engaged workforce, may experience beneficial outcomes such as increased business-unit performance, strong financial returns, and a positive corporate image (Bakker et al., 2011). In addition, the crossover of engagement among members of the same work team may prove valuable for organizational performance (Bakker et al., 2008). Looking into the advantages of work engagement, enterprises may want to promote and implement engagement programs that will certainly culminate into the achievement or organizational objectives like retention and performance (Demerouti & Cropanzano, 2010; Halbesleben & Wheeler, 2008).

The former work of Demerouti (2006) gives evidence that personality may serve as a means in supporting the correlation between job performance and work engagement. Specifically, it has been reported that employees who experience “flow” at work (i.e., absorption, enjoyment and dedication) are able to positively impact their performance levels; however, they need to have certain personality traits (e.g., conscientiousness).

Latest studies have provided analogous findings which state that hard working, self-motivated and disciplined employees – (conscientiousness)- are confident, hopeful and positive, and decipher their levels of work engagement into augmented job performance (Bakker et al., 2012a).

## **Gap Identified**

Studies show that various dimensions of the Big Five Personality Model are related to work engagement (Barrick & Mount, 1991; Hough, Eaton, Dunnette, Kamp & McCloy, 1990; Salgado, 1997; Tett, Jackson & Rothstein, 1991; Vinchur, Schippmann, Sweizer & Roth, 1998). Conscientiousness is the best predictor of work engagement (Barrick and Mount, 1991; Salgado, 1997). Results of a few research studies also show that Extraversion and Conscientiousness predict work engagement in various occupations (Schneider, 1999; Vinchur et al., 1998). These research studies were carried out in the United States of America, Europe and South Africa in different contexts. However, in India (specifically in Indore), the use of psychometric tests is still a controversial issue and has a long way to go. Hence, research regarding the impact of personality dimensions on work engagement is therefore necessary. Personality plays a role in the engagement process because individuals enter the workplace with their own set of personality characteristics (Nayyar R. J. et al., 2012). Therefore, the purpose of this study is to see if there is any relationship between the personality characteristics and various dimensions of work engagement among working women in Indore city. If there is evidence of a relationship, the results can be used by companies for recruiting, selecting and career development of these working women.

## Research Methodology

The study was exploratory in nature. In this study, working women—both married and single—from Indore city were selected for data collection. Non-probability sampling method was used. It was a purposive sampling where respondents were chosen in the age group of 25-34 years, 35-44 years and above 45 years working in different sectors with minimum qualification being undergraduate.

**Sample:** 300 working women which includes 150 married and 150 single women.

### Tools for Data Collection

Two questionnaires were distributed among the subjects for data collection: **The Big Five Inventory (BFI) and Utrecht Work Engagement Scale (UWES).**

### Tools for Data Analysis

Data was analyzed using SPSS 20. Hypotheses were tested using z- test and correlation.

### Objectives of the Study

- 1) To find out the demographic status of working women of Indore.
- 2) To ascertain the Overall Work Engagement Levels of married working women and single working women.
- 3) To compare the overall personality dimensions of working married and working single women.
- 4) To find out particular dimensions of both, personality and work engagement, of married vis-à-vis single working women.
- 5) To study the influence of personality dimensions of Big Five Model on Work Engagement.

### Hypotheses

- H<sub>01</sub>:** *There is no significant difference in the Work Engagement levels of married working and single working women.*  
**H<sub>01a</sub>:** *There is no significant difference in the Vigour Dimension of married working and single working women.*  
**H<sub>01b</sub>:** *There is no significant difference in the Dedication Dimension of married working and single working women.*  
**H<sub>01c</sub>:** *There is no significant difference in the Absorption Dimension of married working and single working women.*  
**H<sub>02</sub>:** *There is no significant difference in the personality dimensions of married working and single working women.*  
**H<sub>02a</sub>:** *There is no significant difference in the Extraversion Dimension of married working and single working women.*  
**H<sub>02b</sub>:** *There is no significant difference in the Agreeableness Dimension of married working and single working women.*  
**H<sub>02c</sub>:** *There is no significant difference in the Conscientiousness Dimension of married working and single working women.*  
**H<sub>02d</sub>:** *There is no significant difference in the Emotional Stability Dimension of married working and single working women.*  
**H<sub>02e</sub>:** *There is no significant difference in the Openness to Experience Dimension of married working and single working women.*

## Analysis of Data

**Table 1: Reliability Analysis of all variables**

Characteristics	Items	Cronbach alpha		
		Married Working Women	Single Working Women	Aggregate
<b>Big Five Inventory</b>	BFI 44-item	0.678	0.743	0.698
Extraversion	BFI 1,6R1,11,16,21R, 26,31R,36	0.700	0.822	0.739
Agreeableness	BFI2R,7,12R,17,22,27R, 32,37R,42	0.635	0.671	0.644
Conscientiousness	BFI3,8R,13,18R,23R,28, 33,38,43R	0.720	0.737	0.725
Emotional Stability	BFI 4,9R,14,19,24R, 29,34R,39	0.728	0.808	0.752
Openness to Experience	BFI5,10,15,20,25,30,35R, 40,41R,44	0.738	0.729	0.739
<b>Work Engagement</b>	UWES 17-item	0.945	0.937	0.946
Vigour	UWES 1,4,8,12,15,17	0.841	0.865	0.860
Dedication	UWES 2,5,7,10,13	0.900	0.843	0.885
Absorption	UWES 3,6,9,11,14,16	0.841	0.885	0.865

Source: Authors' own research

From Table 1, it is seen that the alpha coefficients for the **Big Five Inventory** and **Utrecht Work Engagement Scales** are in line with the acceptable alpha coefficient cut off point of 0.70 (Nunnally & Bernstein, 1994).

**Table 2: Demographic status of working women**

CATEGORIES OF WORKING WOMEN	Married Working Women	Single Working Women
<b>AGE GROUP</b>		
25-34 years	63 (42%)	81(54%)
35-44 years	57 (38%)	45(30%)
Above 45 years	30 (20%)	24(16)
<b>TOTAL</b>	<b>150</b>	<b>150</b>
<b>EDUCATIONAL STATUS</b>		
Under Graduate	21(14%)	27(18%)
Graduation	72(48%)	30(20%)
Post Graduation	51(34%)	69(46%)
Other than PG	06(04%)	24(16%)
<b>TOTAL</b>	<b>150</b>	<b>150</b>
<b>PROFESSIONAL STATUS</b>		
Government Jobs	45(30%)	29(19%)
Teachers	75(50%)	72(50%)
Business	21(14%)	44(29%)
Private Doctors	09(6%)	05(2%)
<b>TOTAL</b>	<b>150</b>	<b>150</b>
<b>LIVING SYSTEM</b>		
Single Home	84(56%)	42(28%)
Extended/Joint Home	66(44%)	30(20%)
Hostels	0(0%)	78(52%)
<b>TOTAL</b>	<b>150</b>	<b>150</b>
<b>SOCIO-ECONOMIC STATUS</b>		
Higher Status	24(16%)	39(26%)
Economic Independence	126(84%)	111(74%)
<b>TOTAL</b>	<b>150</b>	<b>150</b>

Source: Authors' own research

Due to workforce diversity, it is crucial to explore demographic variables influencing work engagement. This can immensely help global organizations (Schaufeli & Salanova, 2007). Although the relationship between personality and demographic variables has been explored in earlier studies in relation to work engagement, inconsistencies still exist (Maslach & Leiter, 2008).

Demographic characteristics of the employees like age, educational status, professional status, lifestyle, marital status and socio economic status significantly influence employee engagement (Swaminathan & Ananth, 2012). Also work experience was found to be a consistent predictor of employee engagement amongst all demographic variables like age, gender, educational qualification, work experience and grade (Mohapatra & Sharma, 2010). Thus, it is evident from literature survey that there is a link between the engagement level and demographic characteristics of the employees.

Organizational and personal resources reduce job demands and help in achieving goals (Bakker & Demerouti, 2007). These resources are related to autonomy, positive self evaluation, self esteem and self efficacy which help employees control and impact the environment (Hobfoll et al., 2003) and their working style. This also influences their behaviour and expected outcomes (Salanova et al, 2010).

H<sub>01</sub>: *There is no significant difference in the Overall Work Engagement levels of working married and working single women.*

**Table 3: Overall Work Engagement Levels of Married Working Women and Single Working Women**

Category	Mean	SD	Z –value
Married working women	47.28	6.49638	0.4177
Single working women	47.54667	7.317889	

$p < 0.05$

According to Gallup Report 2017, there exists a difference in the work engagement levels of employees with different marital levels. Married employees were found to be more engaged as compared to single employees indicating that a settled personal and professional life may be one of the reasons behind high engagement level.

As seen from Table 3, the calculated z - value (0.42) is less than the tabulated value (1.96) at 5% level of significance; hence, the Null Hypothesis is not rejected. It means that there is no significant difference between Work Engagement levels of married working women and single working women. The mean value for single working women is found to be 47.54 which is a little higher than the mean value for married working women (47.28); the reason for this - single women are less occupied at the home front, have less responsibilities, more time and are full of energy to spend on jobs, which leads to greater work engagement (Kong., 2009).

H<sub>02</sub>: *There is no significant difference in the Overall Personality Dimensions of working married and working single women.*

**Table 4: Overall Personality Dimensions of working married and working single women**

Category	Mean	SD	Z –value
Married working women	132.367	12.44123	0.62107
Single working women	129.793	9.297684	

$p < 0.05$

From Table 4, the calculated z - value (0.62) is less than the tabulated value (1.96) at 5% level of significance; hence, the Null Hypothesis is not rejected. It means that there is no significant difference between Work Engagement levels of married working women and single working women.

It can be seen that 'married working' has a higher mean value (132.367) as compared to 'single working' women, which means that married women are naturally energetic, enthusiastic, and action oriented. They are reliable and engaged workers who can be creative and innovative (Kahn, 1990; Macey and Schneider, 2008). Engaged individuals tend to be helpful, trusting, considerate, and like to cooperate with others. Moreover, they are kind to almost everyone and have a forgiving nature (John et al., 1991; John et al., 2008).

**Table 5: Personality Dimensions of Married vis-à-vis Single working women**

Dimensions	Married Working Women		Single Working Women		Z –value	
	Mean	SD	Mean	SD		
Extraversion	24.75	3.73	23.66	3.52	0.271	Accepted
Agreeableness	26.64	4.05	26.48	3.77	0.717	Accepted
Conscientiousness	27.19	3.99	26.81	3.41	0.3786	Accepted
Emotional Stability	23.25	3.86	23.60	4.05	0.2992	Accepted
Openness to Experience	30.55	4.17	29.25	4.75	0.3425	Accepted

$p < 0.05$

Extraversion (24.75), Agreeableness (26.64) and Openness to Experience (30.55) for married working women have higher values as compared to single working women (23.66, 26.48 and 29.25 respectively). Once married, a woman is happy and starts sharing responsibilities with vigour and zeal - be it on the personal front or the professional front. Extraversion is characterized by positive feelings and experiences, and is therefore seen as a positive effect (Clark & Watson, 1991). Research shows that extraversion is a valid predictor of performance in jobs characterized by social interaction (Barrick & Mount, 1991; Bing & Lounsbury, 2000; Lowery & Krilowicz, 1994; Vinchur et al., 1998). Extraversion brings more positive effect due to greater social participation (Srivastava et al., 2008). With social interaction comes openness to experience and a higher score indicating that married working women are unconventional, willing to question and ready to entertain new ideas (Rothmann and Coetzer, 2003). Open individuals are curious about both inner and outer worlds, and their lives are experientially richer. They are willing to entertain novel ideas and unconventional values. Openness to experience may not be a predictor to work engagement (Tett et al., 1991); the probable reason being these women, married or single, belong to different occupations having different requirements. Both married and single working women demonstrate Agreeableness (26.64) by being pleasant, warm and likeable, and tend to act in accordance with other people's interests (Graziano and Tobin, 2009).

Single working women were found to be a little more conscientious with slightly higher emotional stability. Conscientiousness indicates that individuals are goal oriented and more likely to be achievers (Barrick et al., 1993). They are more relaxed, calm, even-tempered and are able to face stressful situations without becoming upset (Hough et al., 1990). Emotional stability is the propensity to respond to threatening situations, frustration, and loss (Boyce, Wood and Powdthavee, 2013). Young single women may be shouldering only professional responsibilities; a few may be responsible at the personal front, but not at the same levels as married women.

**Table 6: Work Engagement Dimensions of Married vis-à-vis Single working women**

Dimensions	Married Working Women		Single Working Women		Z –value	
	Mean	SD	Mean	SD		
Vigour	1.96	1.42826557	1.97	1.42379599	0.0763	Accepted
Dedication	4.31	1.910881	3.30	1.907771	7.983	Rejected
Absorption	3.0344	1.185066	3.0347	1.185062	0.0016	Accepted

$p < 0.05$

Table 6 shows the work engagement dimensions for both the categories of working women. With continuous long working hours, resilience, attaching and immersing themselves in the task allocated, both married and single working women have the same engagement levels for the two dimensions – vigour and absorption. Hence, the Hypothesis  $H_{01a}$  and  $H_{01b}$  are accepted since the calculated z-values (0.0763 and 0.0016) are much lesser than the tabulated value of 1.96.

The difference lies in the Dedication dimension where the mean value for married women is more than for single women. Also the calculated z-value is 7.983, which is higher than 1.92 indicating the Hypothesis  $H_{01b}$  is not accepted.

*Married women face dual responsibilities. Marriage provides emotional stability and support, which encourages a married woman to work upon career progression. They try to complete the task allocated to them, putting in as much effort on the given deadline. In a world dominated by e-mails, smart phones and flexible work schedules, the walls between work and personal life are falling. A smart woman finds ways to integrate them thoughtfully, making it a professional and personal boon (HBR: How Two-Career Couples Stay Happy by Jackie Coleman and John Coleman).*

On the other hand, single women may have to bear pressure from society and family to get married; lack of emotional support may sometimes result in lack of effort and lower dedication at the work place. This can be due to various other situational variables (job related and/or organizational related) which may support or hinder engagement.

Engaged women are naturally energetic, enthusiastic, and action oriented. They adapt quickly to new surroundings and switch easily between activities. They also seem to have a disposition towards cheerfulness, sociability and high activity. As seen from Table 4, married extroverts' sociability and relationship building abilities can positively impact all three psychological conditions of engagement: meaningfulness, resilience, enthusiasm, and intense immersion in work (Kahn, 1990) which is very important to become a satisfied and committed employee.



**Table 7: Correlation between Personality and Work Engagement Correlation**

		Personality	Work Engagement
Personality	Pearson Correlation	1	.385
	Sig.(2-tailed)		.542
	N	300	300
Work Engagement	Pearson Correlation	.385	1
	Sig.(2-tailed)	.542	
	N	300	300

The result in Table 7 indicates that the correlation between Personality and Work Engagement of working women is .385. The p-value is .542 which is more than 0.05, the assumed level of significance. This implies that the correlation coefficient between Personality and Work Engagement is high and statistically significant. Hence, there exists a moderate correlation between Personality and Work Engagement.

## Result

The calculated z - value (0.42) is found to be less than the tabulated value (1.96) at 5% level of significance; hence, the Null Hypothesis ( $H_{01}$ ) is not rejected. It means that there is no significant difference between Work Engagement levels of married working women and single working women.

Extraversion, Agreeableness and Openness to Experience for married working women have higher values as compared to single working women.

Single working women were found to be a little more conscientious with slightly higher emotional stability.

Both married and single working women have the same engagement levels for the two dimensions – vigour and absorption. Hence, the Hypothesis  $H_{01a}$  and  $H_{01b}$  are accepted.

The difference lies in the Dedication dimension where the mean value for married women is more than that for single women. Also the calculated z-value is 7.983, which is higher than 1.92 indicating the Hypothesis  $H_{01b}$  is not accepted.

The correlation between Personality and Work Engagement of working women is .385. The p-value is .542, which is more than 0.05, the assumed level of significance. This implies that the correlation coefficient between Personality and Work Engagement is high and statistically significant. Hence, there exists a moderate correlation between Personality and Work Engagement.

## Findings and Conclusion

In this study, all the five dimensions of the Big Five are found to be correlated with work engagement.

The findings of the study show that married working women are more dedicated and engaged, more extroverted, depict more agreeableness and are open to experience. Single working women are more conscientious and stand at par on emotional stability with married women.

For women professionals, apart from conscientiousness (Ones et al., 2007), agreeableness and openness to experience are other predictors of job engagement (Barrick & Mount, 1991; Hertz & Donovan, 2000).

Also emotional stability is significantly related to performance and productivity (Skyrme, Wilkinson, Abraham, & Morrison, 2005).

This is an unusual mix of personality traits leading to a very complex pattern of personality in women for work demanding interpersonal interactions.

There exists a correlation between personality and work engagement.

## Limitations of the study

Since purposive sampling was used, the respondents selected may not be fully representative of the general population. Also the respondents were selected from a variety of occupations. This limits occupational, organizational or sector specific effects that might have resulted in bias in results. Longitudinal or time series data collection approach can add information in the relationship between personality dimensions and work engagement. Better tools like regression, multiple regression and ANOVA can be used for data analysis.

## Scope for further study

Future studies can be occupational, organizational or sector specific for generalized outcomes since work engagement is an outcome of both individual and contextual factors. In such specific studies, contextual factors in work engagement can be controlled.

Personality has an outcome on performance and engagement. Organizations opting for selection and staffing of employees with certain personalities and “best fit” attributes need to keep in mind that apart from personality (especially conscientiousness and emotional stability), cognitive abilities, motivational levels, emotional intelligence of employees, past experiences and trait affectivity also have to be taken into consideration. A rigorous selection process should follow rigorous job analysis and multiple tools and techniques for evaluating employees. Psychometric testing can be used to assess the personality dimensions during the selection process.

This study has been carried out comparing married and single working women. It can also be carried out by comparing working men and women. A comparative study can further be carried out on working women aged 40 and above. The impact of personality can be studied on Work Engagement of various demographic variables.

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# Microfinance on Poverty Alleviation: Empirical Evidence from Indian Perspective

MOHDAZHARUD DIN MALIK

## Abstract

This paper is a modest attempt to collect data from northern, southern and central India to analyze the impact of microfinance on poverty through empirical evidence from across the country. The respondents were divided into two groups, Participants and Non-Participants. Participants were members of Self Help groups (SHGs) which have benefited from credit and had received bank loans. Non-participant members were those who were eligible for microfinance and formed SHGs, but did not obtain credit up to the time of the survey. As per the NABARD guidelines, SHGs are provided bank loans only after active existence of the groups for about six months since inception. Non-participants belonged to the group which was less than six months old at the time of survey and have not availed any benefit from the microfinance program. The study concludes that the socio-economic profile of sample respondents with experience of less than six months was completely different from the respondents with experience of more than six months.

JEL Classification: G21, P46.

**Keywords:** *Microfinance, SHGs, poverty alleviation.*

## Introduction

*“The poor are left in poverty, not because they are lazy, But because they lack access to capital.”*

### **Milton Friedman**

Microfinance is a worldwide movement whose object is 'a world in which as many poor and near-poor households as possible receive permanent access to an appropriate range of high quality financial services, including not only credit, but also insurance and savings. The major objective of microfinance for policy planners in India is to search for products and strategies for delivering financial services to the poorer and small entrepreneurs mainly from backward areas in a sustainable manner that generally lack banking related services. The source of microfinance has been viewed as a development tool which would alleviate poverty, empower women and enhance growth of the country through financial inclusion. This sector has grown very swiftly over the last few decades. The Bangladesh economist Mohammad Yonus in 1976 was credited with leaving the foundation of Grameen Bank; India is also witnessing progressive growth of microfinance activities over the past few decades or more. Microcredit does not directly address structural problems facing Indian society and the economy, and it is not effective as it will be when economies of scale are realized and a more supportive policy environment is created (Hume & David, 2008). Economic theory advises that financial development can contribute to economic growth, and growth can contribute to poverty alleviation, although there is a wide divergence about whether and under what circumstances this occurs. Financial expansion may play a greater role in poverty alleviation directly and indirectly, through credit constraints on the poor and fostering economic growth that benefits poor people. Microfinance has been found to increase and diversify domestic income, promote household savings, and brings about “consumption smoothing” in the face of instability of income (Meagher, Patrich, 2002). According to data, there are about 4,000 Microfinance Institutions (MFIs) across the world. The number of users of credit services from the sector was estimated at 96.2 million. The number of those who used microfinance for savings exceeded the number of borrowers at 955.8 million. Among all the MFIs, Latin America had the largest share of 28 per cent followed by Eastern Europe and Central Asia region with 21 per cent. In term of borrowers and savers, South Asia had the largest share at more than 50 per cent and more than one-third respectively. The total loan volume of the sector across the globe as of March 2016 was of the order of US\$ 54.2 billion. Latin America had a lion share of 38 per cent of loan volumes and South Asia had

minimum loan (about 10 per cent), which is low considering the sheer number of clients in the region. South Asian loans were typically small in size and will remain the same for some time. Savings through MFIs amounted to US\$ 16 billion with 40 per cent of savings being accounted for by the Latin American region. Equity to the extent of US\$ 9.9 billion had been invested in the microfinance sector of which Latin America region accounted for 35 per cent followed by Eastern Europe/Central Asia with 21 per cent and South Asia with 14 per cent (Srinivasan, N. 2010). The number of groups linked at the end of March 2010 increased to 4.59 million and the sum of loans was outstanding at Rs. 272.66 billion. Asian microfinance has increased globally and it has facilitated growth of the financial sector. According to the 2005 global survey of 446 microfinance institutions (MFIs) conducted by the Microfinance Information Exchange, Inc. (MIX), (Benchmarks, 2005), Asian institutions have grown over 4 billion dollars in loans and served an impressive 22.5 million borrowers. While Asian institutions have less than one fourth of the total global data set, they serve over two thirds of the total borrowers (Shastri, Rajesh Kumar 2009).

While there is no generally accepted definition of poverty, economic measurements of poverty level based on consumption and income data have commonly been used to measure poverty. For instance, the World Bank defines two thresholds of poverty – the 'extreme poor' who live on less than \$1.90 a day and the merely 'poor' who live on less than \$2 a day based on per capita consumption (Banerjee and Duflo, 2007). While the dollar a day number may be a useful heuristic for policy makers and researchers, it does not capture the realities of the poor – feelings of powerlessness and vulnerability hazards for example, or poor nutrition and health arising from continued deprivation, or gender differences in poverty (Chakravarti, 2006; Ravallion, 2002). Economic measures of poverty may reflect the structural aspects of poverty but do not capture the cultural, social and psychological dimensions of poverty and more importantly, precludes any kind of agency to the poor by ignoring their public relations, existence strategies and practices of resistance (Arora and Romijn, 2012).

Some research work has recognized qualitative indicators of poverty such as helplessness, vulnerability, deprivation, and deficiency that arise from income poverty and the incapability of the poor people to leverage resources mandatory to fulfil their basic needs (Bradshaw, 2007; Chambers, 1995; Chakravarti, 2006).

## Review of Literature

Hulme and Mosley (1996, p.109) in their study on microfinance to eradicate poverty, argue that a well-designed program can improve the living standard of the poor and can move them out of poverty. According to these researchers, "evidence shows that the influence of a loan on a borrower's revenue is related to the level of income" as people with more income have a greater level of investment opportunities and so these credit schemes are more likely to benefit the "middle and upper poor" (1996, pp109-112).

Wright (1999) highlighted the responsibilities of only taking higher income as a measure of the impact of a microfinance program on poverty levels. He states that there is a vast difference between increasing income and reducing poverty (1999). He opines that by increasing the income of the poor, MFIs are not necessarily reducing poverty. It depends how the poor use this money. Often it is gambled away or spent on alcohol (1999), so focusing merely on increasing incomes is not sufficient. The effort needs to be on helping the poor to "sustain a quantified level of well-being" (Wright, 1999) by providing them a variety of financial services tailored to their needs so that their net wealth and income security can be improved.

Rutherford (2000) analyzed the difference between microfinance and micro-credit. Micro-credit refers to micro loans given to poor people while microfinance is a broader term that includes savings from low-income households, consumption loans and insurance along with micro-credit. It also helps in distribution marketing of clients' output. It includes a range of financial services that seek to meet the basic needs of poor people, also protecting them from cyclical fluctuating incomes and other shocks, and helps to promote their incomes and livelihood.

Mayoux (2001, p.52) states that while microfinance has significant potential, its main effects on poverty are:

- Microfinance is a momentous contribution to increasing incomes of the better-off poor, especially for women.
- It contributes to smoothing the peaks and troughs in income and expenditure, thereby enabling the poor to face hardships in life.

Therefore, while much has been discussed about the impact of microfinance projects on poverty, we have seen that when MFIs understand the needs of the poor and try to meet these needs, projects can have a positive impact on reducing the vulnerability, not just of the poor, but also of the poorest in society.

S. Sundari and N. Geetha (2000), in their paper “Poverty and Micro enterprises”, conducted a study on gender inequality in access to institutional credit. The inequality has been reduced over a period of time. Empowerment of women will be possible only if they are trained and build skills for employment. According to them, skill training includes areas like enterprise development, increased access to credit, social, economic and political strategies and new approach to markets.

Robinson (2001) states that there was a turning point in the history of microfinance when MFIs such as Grameen Bank showed that they could provide small loans and savings services profitably on a large scale. They didn't receive continuing subsidies, they were commercially sound and fully supportable, and could achieve wide outreach to clients. It was also at this time that the term “microcredit” got popularity in development (MIX3, 2005). It was now obvious for the first time that microcredit could provide large-scale outreach profitably.

Zaman Hassan (2001) has proven the extent to which micro-credit reduces poverty and vulnerability through a case study. This has made a positive impact on the overall economic status of the group members. Additional employment generated through the group has provided scope for increase in the household income.

Swain (2007) analyzed the role of SHG program on poverty, vulnerability and socio economic development of the program participants. The study included data in two periods from five states in India. He used group discussions and interviews for his studies. Twenty group discussions were conducted; four in each of the five surveyed states. In each group, there were 15-20 SHG participants each from different SHGs. In order to assess the outcomes of microfinance program, the SHG members were compared with respondents who were exposed to the concept of SHGs till the time of the survey. The comparison showed differences. The level of confidence, mobility, exposure and communication skills were better in case of SHG participants. Majority (88 per cent) of the SHG respondents showed a positive response in the meetings held thereafter. The SHG households showed a positive response in the meetings that were held thereafter. About 87 per cent of the SHG respondents expressed their ability to meet a financial crisis in the family. Almost 60 per cent of the SHG members and 43 per cent of the control group members reported that borrowing women themselves took the crucial decisions regarding the purchase of raw material and product pricing. About 50 per cent of the microfinance participants reported an increased level of respect from their spouses as compared to just 20 per cent of the control group respondents. When compared to the control group, the data also showed greater involvement of SHG participants in decision-making, children's marriage, buying and selling of property, sending their daughters to school, etc. However, a small increase of about 8 per cent in family violence was also noticed within the participant households.

Sarawathy et al., (2009) conducted a study on the role of microfinance in Krishnagiri district. The study highlighted the role of Government of India, NABARD, NGO and banks. The questionnaire was distributed among 75 members of 16 SHGs of 9 NGOs. The studies showed a positive response from members agreeing that their income had increased after joining a SHG. It showed that SHGs have become the development ambassadors of villages.

Thus, most of the above studies revealed microfinance programs helped reduce poverty, generate employment opportunities, improve living standards, reduce gender inequality and improve status of women, whereas a few studies showed negative effects of microfinance program, particularly regarding the unchanged level of poverty, ineffective reach to the poorest, lower amount of bank loans, unproductive use of group loans and mis-targeting of the program. Most criticisms about the negative impact of micro finance has come from southern India, especially related to Andhra Pradesh crisis. The review of literature gives us an insight about both positive and negative aspects of the program. In case of India, a developing country, poverty is a serious issue. Despite having one of the fastest growing economies in the world, India's around 170 million people, or 12.4% lived in poverty (defined as \$1.90 (INR135.5)). Government and NGOs of the country have been launching poverty alleviation programs in the country. Most of the studies have been carried out in central and southern regions; however, in northern India, there is a dearth of microfinance studies. There is no comprehensive study of the impact of microfinance on poverty alleviation covering all the three zones of India. This study is a modest attempt to collect data from northern, southern and central India to analyze the impact of microfinance on poverty through empirical evidence from all over India.

## Design of Survey and Data

In this study, the impact of microfinance programs has been determined by comparing two groups: participant members of the program (henceforth called as participants) and non-participants. Participants were members of SHGs which had benefited from the scheme and received bank loans. Non-participant members were those in the same area who were eligible for the microfinance program and had formed SHGs but did not access credit up to the time of the survey. As per the NABARD

guidelines, Self Help Groups are provided bank loans only after active existence of the groups for about six months from inception. So, non-participants belonged to SHGs which were less than six months old at the time of survey; and had not availed any benefit of the program.

The study was based on both primary and secondary data. The primary data was collected through interviews with participants and non-participants from sample households. Primary data was collected from SHG members based on a specially structured pre-tested questionnaire through personal interview method. The study was conducted all over the country. While it was not possible to collect data from all areas, districts were selected from 3 states for data collection. From the north, the state of Jammu and Kashmir was selected; data was collected from district Anantnag. In central India, data was collected from district Gwalior in the state of Madhya Pradesh. In the south district, Madurai was selected from Tamil Nadu. All the three regions were selected on the basis of average infrastructure. Secondary source of data was also used to understand the concepts, definitions, theories and empirical results. The researcher has used books, research literatures, articles, journals and reports, and the internet as secondary sources for this study.

The researcher has taken a random sample of 100 each in three districts, namely, Gwalior from Madhya Pradesh, Anantnag from Jammu and Kashmir and Madurai from Tamil Nadu. The researcher distributed 300 questionnaires to participant and non-participant SHG members of the program where participants had benefited from the scheme and received bank loans while non-participants in the same area were eligible for the microfinance scheme and had formed SHGs, but did not get access to credit up to the time of the survey. In total, 300 samples were used for the study. The questionnaire was distributed to both men and women respondents. As per a survey in Gwalior district of Madhya Pradesh, out of 100 questionnaires, 43 responses were from respondents with more than six months of experience and 36 responses were from respondents with less than six months of experience. In Anantnag district of Jammu and Kashmir, 47 responses were from respondents with more than six months of experience and 42 responses were from respondents with less than six months of experience. In Madurai district of Tamil Nadu, 39 responses were from respondents with more than six months of experience and 35 responses were from respondents with less than six months of experience.

To ensure reliability of data, only 70 respondents were selected for data analysis from each district; 35 respondents with experience of less than six months and 35 respondents with experience of more than six months. Regression analysis through SPSS was used to compare respondents with experience of less than six months and more than six months. Both socio-economic variables were selected for data collection.

## Northern India

### Social and Economic Empowerment of Respondents in Jammu & Kashmir

Table 1.I. Reliability Test

S.N.	Variables	Cronbach's Alpha	No. of Items
1	Socio-Economic empowerment of respondents with experience of less than six months in Jammu & Kashmir	.833	6
2	Socio-Economic empowerment of respondents with experience of more than six months in Jammu & Kashmir	.817	6

Source: survey data

The reliability test was conducted on data among two groups of variables - one group with experience of less than six months and the other group with experience of more than six months. The obtained values of Cronbach's Alpha Are Greater than the Standard Value of Cronbach's Alpha i.e. 0.7; it means that the data is reliable and provides necessary information.



**Table 1.II**  
**Socio-Economic Empowerment of both Experienced and Inexperienced Respondents in Anantnag District of Jammu and Kashmir**

Variables	Part first Experience of less than six months				Part second Experience of more than six months			
	Fully benefit	Partly benefit	Not benefit	Total	Fully benefit	Partly benefit	Not benefits	Total
Improvement in personal and family health	4 (11.4%)	9 (25.7%)	22 (62.8%)	35 (100%)	11 (31.4%)	18 (50.4%)	6 (17.1%)	35 (100%)
Increase in income	1 (2.8%)	3 (8.5%)	31 (88.5%)	35 (100%)	9 (25.7%)	22 (62.8%)	4 (11.4%)	35 (100%)
Employment opportunity	8 (22.8%)	16 (45.7%)	11 (31.4%)	35 (100%)	11 (31.4%)	20 (57.1%)	4 (11.4%)	35 (100%)
Increase in savings	1 (2.8%)	3 (8.5%)	31 (88.5%)	35 (100%)	10 (28.5%)	17 (48.5%)	8 (22.8%)	35 (100%)
Social status	3 (8.5%)	5 (14.2%)	27 (77.1%)	35 (100%)	6 (17.1%)	9 (25.7%)	20 (57.1%)	35 (100%)
Importance in community	4 (11.4%)	6 (17.1%)	25 (71.4%)	35 (100%)	4 (11.4%)	9 (25.7%)	22 (62.8%)	35 (100%)

Source: survey data

Table 1.II shows the socio-economic empowerment of sample respondents with experience of less than and more than six months in Anantnag district of Jammu and Kashmir. The table is divided into two parts; part first shows sample respondents with experience of less than six months and part second shows sample respondents with experience of more than six months. Data indicates that there is a lot more improvement in economic status of respondents with experience of more than six months through microfinance than respondents with experience of less than six months after joining a self-help group. But the social condition of respondents in both the groups is almost the same. In Jammu and Kashmir, most women respondents stated that after joining SHG, the social status of women decrease. The data was analyzed through SPSS by using regression analysis of respondents between experience of less than six months and more than six months.

**Table 1.III. Regression of Sample Respondents with Experience of Less Than Six Months and More Than Six Months for Socio-Economic Empowerment in Anantnag District of Jammu and Kashmir**

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.183 <sup>a</sup>	.265	.011	3.66648	2.049

a. Predictors: (Constant), Experienced Above Six Months

b. Dependent Variable: Experienced Less than Six Months

The model shows 'Above Six Months' respondents as an independent variable and 'Below Six Months' respondents as a dependent variable. The model summary table indicates that 'Above Six Months' respondents have 26.5% effect on 'Below Six Months' respondents. The square value of the table is .265 which means 'Above Six Months' respondents have direct but low relationship with 'Below Six Months' SHG members in Anantnag and the R Value 0.183 shows positive, but very low correlation. The Durbin Watson value is between 1 – 3 which means that there is no auto correlation of the errors – data is free of auto correlation.

### ANOVA<sup>a</sup>

Table tests whether the overall regression model is a good fit for the data.

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.234	1	.262	2.001	.015 <sup>b</sup>
	Residual	1218.331	59	21.776		
	Total	1218.603	60			

a. Dependent Variable: Experienced Below Six Months

b. Predictors Constant: Experienced Above Six Months

This model has an average fit as indicated by F-test value which is 2.001 insignificant at .015b level of significance.

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.001	3.369		7.072	.000
	Above Six Months	-.024	.211	.105	1.180	.011

a. Dependent Variable: Below Six Months

The result of regression from the coefficient table indicates that 'Above Six Months' respondents have a direct but low relationship with 'Below Six months' SHG respondents in Anantnag. It shows the socio-economic condition of members with experience of less than six months is different from the respondents with experience of more than six months in Anantnag district of Jammu and Kashmir. Having beta value of 0.105 tested through t-test having t-value of 1.180 (t standard value is 1.96) which is insignificant at 0.011 level of significance.

## Central India

### Social and Economic Empowerment

#### Table 1.IV Reliability Test

1	Socio-Economic empowerment of respondents with experience of less than six months in Madhya Pradesh	.761	6
2	Socio-Economic empowerment of respondents with experience of more than six months in Madhya Pradesh	.816	6

Source: Survey Data

The reliability test was taken on data among two groups of variables. The obtained values of Cronbach's Alpha are Greater than Standard Value of Cronbach's Alpha i.e. 0.7; it means that the data is reliable and provides necessary information.

**Table 1.V. Socio-Economic Empowerment of both Experienced and Inexperienced Respondents in Gwalior**

Variables	Part first Experience of less than six months				Part second Experience of more than six months			
	Fully benefit	Partly benefit	Not benefit	Total	Fully benefit	Partly benefit	Not benefits	Total
Improvement in personal and family health	2 (5.7%)	3 (8.5%)	30 (85.7%)	35 (100%)	11 (31.4%)	18 (50.4%)	6 (17.1%)	35 (100%)
Increase in income	3 (8.5%)	4 (11.4%)	28 (80%)	35 (100%)	11 (31.4%)	22 (62.8%)	2 (5.7%)	35 (100%)
Employment opportunity	12 (34.2%)	16 (45.7%)	7 (20%)	35 (100%)	13 (37.1%)	20 (57.1%)	2 (5.7%)	35 (100%)
Savings increase	3 (8.5%)	5 (14.2%)	27 (77.1%)	35 (100%)	10 (28.5%)	19 (54.2%)	6 (17.1%)	35 (100%)
Social status	7 (20%)	12 (34.2%)	16 (45.7%)	35 (100%)	12 (34.2%)	16 (45.7%)	7 (20%)	35 (100%)
Importance in community	9 (25.7%)	11 (31.4%)	15 (42.8%)	35 (100%)	14 (40%)	16 (45.7%)	5 (14.2%)	35 (100%)

Source: survey data

Table 1.V. shows the socio-economic empowerment of sample respondents with experience of less than and more than six months in Gwalior district of Madhya Pradesh. The table is divided into two parts; part first shows sample respondents with experience of less than six months and part second shows sample respondents with experience of more than six months. Data indicates that there is significant improvement in the socio-economic status of the sample respondents with experience of more than six months through microfinance than respondents with experience of less than six months after joining a self-help group. The data was analyzed through SPSS by using regression analysis between respondents with experience of less than six months and those with more than six months' experience.

**Table 1.VI. Regression of Sample Respondents with Experience of Less Than Six Months and More Than Six Months for Socio-Economic Empowerment in Gwalior District of Madhya Pradesh**

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.117 <sup>a</sup>	.027	.016	3.66648	2.049

a. Predictors: (Constant), Experienced Above Six Months

b. Dependent Variable: Experienced Less than Six Months

The model shows 'Above Six Months' sample respondents as an independent variable and 'Below Six Months' respondents as a dependent variable. The model summary table indicates that 'Above Six Months' respondents have 2.7% effect on 'Below Six Months' respondents. The r square value of the table is .027 which means 'Above Six Months' respondents have a direct but very low relationship with 'Below Six Months' SHG members in Gwalior and the R Value 0.117 shows positive, but very low correlation. The Durbin Watson value is between 1 – 3; it means that there is no auto correlation of the errors – Data is free of auto correlation.

### ANOVA<sup>a</sup>

Table tests whether the overall regression model is a good fit for the data.

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.262	1	.262	2.016	.013 <sup>b</sup>
	Residual	1328.341	61	21.776		
	Total	1328.603	62			

a. Dependent Variable: Experienced Less than Six Months

b. Predictors Constant: Experienced Above Six Months

This model has average fit as indicated by F-test value which is 2.016 insignificant at .013<sup>b</sup> level of significance.

### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	24.001	3.389		7.082	.000
	Above Six Months	-.024	.221	.118	1.115	.013

a. Dependent Variable: Below Six Months

The result of regression from the coefficient table indicates that 'Above Six Months' respondents have a direct but low relationship with 'Below Six months' SHG respondents in Gwalior. It shows the socio-economic condition of members with experience of less than six months is different from respondents with experience of more than six months in Gwalior district of Madhya Pradesh. Having beta value of 0.118 tested through t-test having t-value of 1.115 (t standard value is 1.96) which is insignificant at 0.013 level of significance.

## Southern India

### Social and Economic Empowerment

Table 1. VII. Reliability Test

1	Socio-Economic empowerment of respondents with experience of less than six months in Tamil Nadu	.796	6
2	Socio-Economic empowerment of respondents with experience of more than six months in Tamil Nadu	.832	6

Table 1. VIII. Socio-Economic Empowerment of both Experienced and Inexperienced Respondents in Madurai Tamil Nadu

Variables	Part first Experience of less than six months				Part second Experience of more than six months			
	Fully benefit	Partly benefit	Not benefit	Total	Fully benefit	Partly benefit	Not benefits	Total
Improvement in personal and family health	1 (2.8%)	4 (11.4%)	30 (85.7%)	35 (100%)	9 (25.7%)	16 (45.7%)	10 (28.5%)	35 (100%)
Increase in income	2 (5.7%)	3 (8.5%)	30 (85.7%)	35 (100%)	12 (34.2%)	22 (62.8%)	1 (2.8%)	35 (100%)
Employment opportunity	8 (22.8%)	13 (37.1%)	14 (40%)	35 (100%)	13 (37.1%)	20 (57.1%)	2 (5.7%)	35 (100%)

Variables	Part first Experience of less than six months				Part second Experience of more than six months			
	Fully benefit	Partly benefit	Not benefit	Total	Fully benefit	Partly benefit	Not benefits	Total
Savings increase	3 (8.5%)	4 (11.4%)	28 (77.1%)	35 (100%)	11 (31.4%)	19 (54.2%)	5 (14.2%)	35 (100%)
Social Status	9 (25.7%)	13 (37.1%)	13 (37.1%)	35 (100%)	14 (40.2%)	16 (45.7%)	5 (14.2%)	35 (100%)
Importance in community	6 (17.1%)	18 (50.4%)	11 (31.4%)	35 (100%)	12 (34.2%)	13 (37.1%)	10 (28.5%)	35 (100%)

Source: survey data

Table 1.VIII shows the socio-economic empowerment of sample respondents with experience of less than and more than six months in Madurai district of Tamil Nadu. The table is divided into two parts; part first shows sample respondents with experience of less than six months and part second shows the sample respondents with experience of more than six months. Data shows that there is a significant amount of improvement in socio-economic status of members with experience of more than six months through microfinance than respondents with experience of less than six months after joining a self-help group. The data was analyzed through SPSS by using regression analysis between experienced and less experienced respondents.

**Table 1.X. Regression of Sample Respondents with Experience of Less Than Six Months and More Than Six Months for Socio-Economic Empowerment in Madurai Tamil Nadu**

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.119 <sup>a</sup>	.021	.016	3.66648	2.049

- a. Predictors: (Constant), Experienced Above Six Months
- b. Dependent Variable: Experienced Less than Six Months

The model shows 'Above Six Months' respondents as an independent variable and 'Below Six Months' as a dependent variable. The model summary table indicates that 'Above Six Months' respondents have 2.1% effect on 'Below Six Months' respondents. The r square value of table is .021 which means 'Above Six Months' respondents have direct but very low relationship with 'Below Six Months' SHG members in Madurai Tamil Nadu and the R Value 0.119 shows positive but very low correlation. The Durbin Watson value is between 1 – 3; it means that there is no auto correlation of the errors – Data is free of auto correlation.

**ANOVA<sup>a</sup>**

**Table tests whether the overall regression model is a good fit for the data.**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.262	1	.262	2.016	.015 <sup>b</sup>
	Residual	1328.341	61	21.776		
	Total	1328.603	62			

- a. Dependent Variable: Experienced Less than Six Months
- b. Predictors Constant: Experienced Above Six Months

This model has average fit as indicated by F-test value which is 2.016 insignificant at .015<sup>b</sup> level of significance.

### Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1	(Constant)	24.001	3.389	7.082	.000
	Above Six Months	-.024	.221	.114	1.110

a. Dependent Variable: Below Six Months

The result of regression from the coefficient table indicates that 'Above Six Months' respondents have a direct but low relationship with 'Below Six Months' respondents. It shows the socio-economic condition of respondents with experience of less than six months is different from respondents with experience of more than six months in Madurai district of Tamil Nadu. Having beta value of 0.115 tested through t-test having t-value of 1.111 (t standard value is 1.96) which is insignificant at 0.013 level of significance.

## Conclusion

The study concludes that microfinance pre-supposes a drastic, dynamic and democratic change in the perception and expectation change in our society. Social and Economic empowerment through microfinance leads to empowerment of people in many areas including socio-economic opportunity, property rights, social equality, personal rights, family development, market development, community development and eventually, nation development. Data from all three zones indicates positive relationship between microfinance and economic development. But variables like social status and greater importance in community shows a negative relationship with microfinance in Anantnag district of Jammu and Kashmir, because all the data from this area was collected from Muslim respondents. The Muslim community prefer their women to be home-bound.

## Scope for Future Research

- The variables and sub-variables used in this study need to be further investigated. Research studies in future can further refine and strengthen each parameter of the study for better understanding.
- Future research can also focus on the refinement of scale used to measure various parameters of the study. The modifications would also make it possible for the researchers to probe and improve areas excluded by existing research due to various constraints.
- Future research can get lessons from this study and highlight the lack of existing data, which will contribute to the overall improvement of information system on micro finance.
- This evidence that research on micro finance is insufficient, itself indicates the need for further research in the area.

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# China-US Trade Relations: A Fresh Perspective

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## Abstract

This paper discusses the present relationship between China and the United States with respect to trade and its implications. These two countries are the powerhouses of the global economy, and their relationship should be thoroughly analyzed in order to assess how their potential trade war could affect the world. This paper introduces the background of each country, discusses their relationships and closes with a future outlook and conclusion. It offers a fresh perspective to China-US Trade relations in 2018 and beyond.

**Keywords:** *International trade, trade barriers, China, USA.*

## Introduction

"We are not in a trade war with China; that war was lost many years ago by the foolish, or incompetent, people who represented the U.S." This quote made by United States president Donald Trump in April 2018 emphasizes how serious trade relations between China and the United States have become recently [Bryan, 2018]. The United States maintains a trade deficit of \$300 to \$500 billion (depending on the source) with China and has complained about Human Rights violations and Intellectual Property Theft by Chinese authorities. China, on the other hand, blames the United States for its recent protectionist measures.

This conflict is of particular global interest: China and the United States are among the most influential nations in the world. As major economies of the world, both nations engage together in various financial organizations such as the World Trade Organization, which China was made part of in 2011 [WTO, 2018] after 15 years of negotiations and due to US initiative [Wang, 2013] or the International Monetary Fund (China joined in 1945 and rejoined in 1980) [IMF, 2017]. On the political side, they collaborate on all kinds of global issues in the United Nations [UN, 2018]. Various members have tried to appeal to both sides at the IMF Spring Meetings, since their dispute could potentially be the beginning of a global recession [Jiming & Posen, 2018]. Furthermore, the conflicts could cause a new political divide. It is not an exaggeration to say that the recent issues between both countries can affect the future of our planet.

This paper attempts to provide a more thorough understanding of the conflict in China-U.S. trade relations. The first **section** covers historical milestones in bilateral trade between the two countries and the reasons that have led to the current situation. Export data of the year 2016 has been used to examine the pattern of trade and its key industries. **The conclusion** provides an overview of most recent developments and their correlation with each other. All in all, the aim of this paper is to use statistical and historical data to explain current events in the trade relations between China and the United States, and provide an outlook on possible consequences.

## History

Official trade relations between China and the United States have been in existence since 1844; the first attempts to connect had been made roughly 60 years before.<sup>1</sup> By signing the treaty of Wanghia, the US acquired trading rights with China. In the 1950s and 60s, conflicts of interests in the Korean War and the Vietnam War led to a complete freeze in Chinese-US trade, which lasted for roughly 20 years. In the beginning of the 70s, US Secretary of State Henry Kissinger and US president Richard Nixon finally managed to create a common ground for modern trade relations by implementing a five-step plan to establish China as a major global trading partner. During the Cold War, this step was partly politically motivated to consolidate against the

common enemy, Soviet Union. However, it would have a long-lasting impact on both countries' economies. From then on, China's Gross National Product was expected to grow from 7% to 50% of the United States' GNP [Wang, 2013].

Until 1979, trade grew with every passing year reaching a cumulative \$2.4 billion within just eight years. Various treaties concerning taxation and 'most favored nation' status were signed in the subsequent years. Subsequently, China did not have to pay high tariffs on its exports to the US anymore. Other barriers for people, products and capital were removed continuously. By 1984, the United States had become China's third most important trade partner after Japan and Hong Kong, especially due to high Chinese textile exports [Wang, 2013].

However, the improvements would not last long. As a reaction to the Tiananmen Square incident in 1989, the United States imposed heavy sanctions on China. The relations remained tense during the 90s with claims of dumping, market access limitations and intellectual property theft arising. They eventually improved when China opened up to global markets in the early 2000s, joined the WTO, acquired U.S. Treasury securities and opened its currency and stock exchange to foreign investors.<sup>ii</sup> Till date, both countries come together on a continuing basis to negotiate for future economic cooperation.<sup>iii</sup>



Figure 1: Development of trade relations  
Source: Authors' own research

## Current Shape of Trade

Both countries' combined share in the world economy is 40% [Jiming & Posen, 2018]. Both countries are severely dependent on each other; for example, China holds U.S. bonds amounting to \$1.2 trillion [Murray, 2018]. As a result, any U.S. measure affecting the Chinese economy, currency or liquidity, will impact both economies. In addition, both countries have common trading partners such as the European Union<sup>iv</sup> or Japan<sup>v</sup>. Furthermore, the two countries' companies are closely correlated, too. U.S. firms get involved in joint venture collaborations with Chinese enterprises on a large scale; others sell to or supply from the Chinese market. US FDI (foreign direct investments) in China amount to roughly \$100 billion.<sup>vi</sup> In spite of having divergent political systems, both countries have become increasingly interrelated with every passing year.

Historical data reveals that there has not always been a trade deficit on the U.S. balance with China. In 1985, U.S. exports to China amounted to \$3.856 billion, whereas imports were \$3.862 billion (see table below). From then on, the points discussed above such as Chinese opening and the acceleration of globalization contributed to an imbalance that increased every year. From the mid-90s till the present, Chinese exports in electronics, machinery, textiles and furniture have created a large trade deficit.<sup>vii</sup>

Month	Exports	Imports	Balance
January 1985	319.2	293.1	26.1
February 1985	222.7	281.0	-58.3
March 1985	239.5	293.0	-53.5
April 1985	265.6	283.3	-17.7
May 1985	329.3	295.1	34.2
June 1985	280.9	348.7	-67.8
July 1985	383.1	344.4	38.7
August 1985	320.9	311.8	9.1
September 1985	339.1	391.8	-52.7
October 1985	377.1	385.5	-8.4
November 1985	316.3	327.5	-11.2
December 1985	462.0	306.5	155.5
<b>TOTAL 1985</b>	<b>3,855.7</b>	<b>3,861.7</b>	<b>-6.0</b>

Table 1: U.S. trade in goods with China, 1985; in million \$  
Source: Authors' own research based on United States Census Bureau [2018]

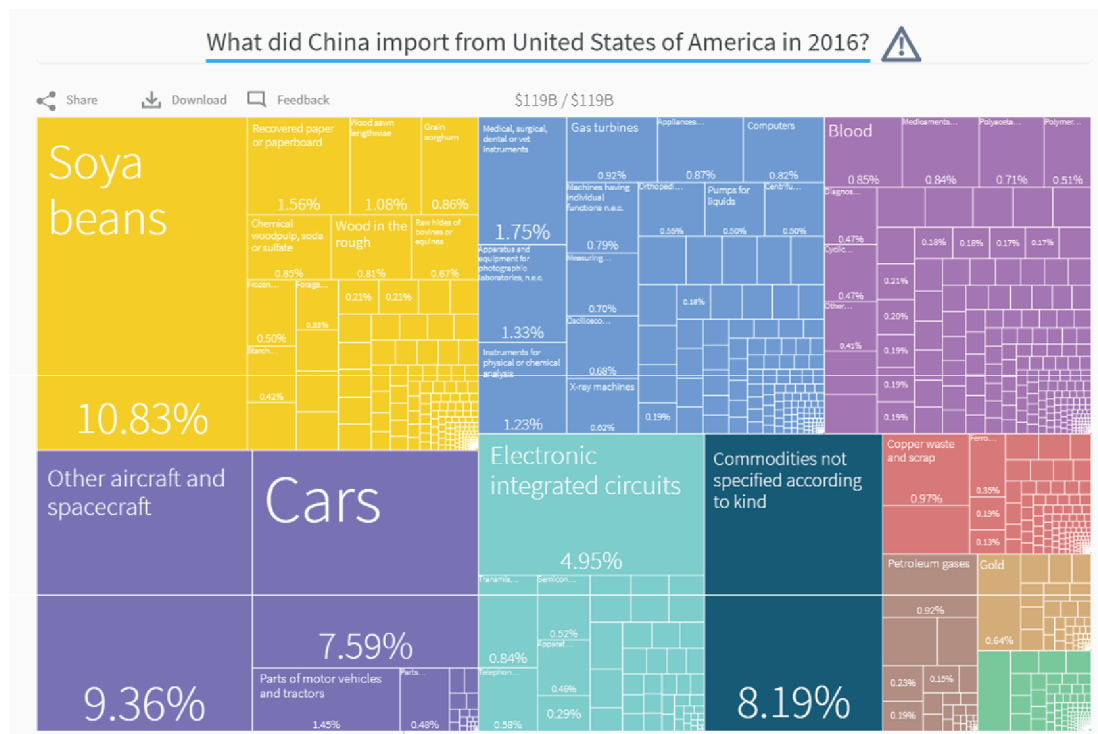


Figure 2: What did China import from United States of America in 2016?  
Source: Center for International Development at Harvard University [2018b]

In 2016, U.S. exports to China were recorded at \$119 billion, according to the Harvard Atlas of Economic Complexity.<sup>viii</sup> Vegetables, foodstuff and wood were the largest items exported, valued at \$27.3 billion (soya beans formed \$12.9 billion). Other large exports included recovered paper or paperboard (\$1.85 billion) and wood sawn lengthwise (\$1.29 billion). The main companies involved were Tyson Foods, Pepsi, Nestlé United States, Coca Cola and Kraft Heinz.

The second largest sector, transport vehicles, contributed another \$22.8 billion to United States' exports to China. Its main industries were aircraft and spacecraft (\$11.1 billion), cars (\$9.01 billion) and parts of motor vehicles and tractors (\$1.73 billion). The third largest segment was machinery with total exports to China valued at \$20.1 billion. It is one of the most diversified segments with a number of industries forming large components, the largest ones being - medical, surgical, dental or vet instruments (\$2.07 billion), apparatus and equipment for photographic laboratories, n.e.c. (\$1.58 billion) and instruments for physical or chemical analysis (\$1.46 billion). This segment also includes computers (\$973 million).

Finally, chemicals and plastics with a total export volume of \$15.5 billion and electronics (\$12.3 billion) complete the most important sectors of US exports to China. As can be seen in the table below, vegetables, foodstuff, wood and transport vehicles have enjoyed the largest growth rates in the last few years, while electronics had a boom roughly ten years ago, but has stagnated ever since. Minerals (brown-red colored) have also recorded a decline in absolute figures.<sup>ix</sup>

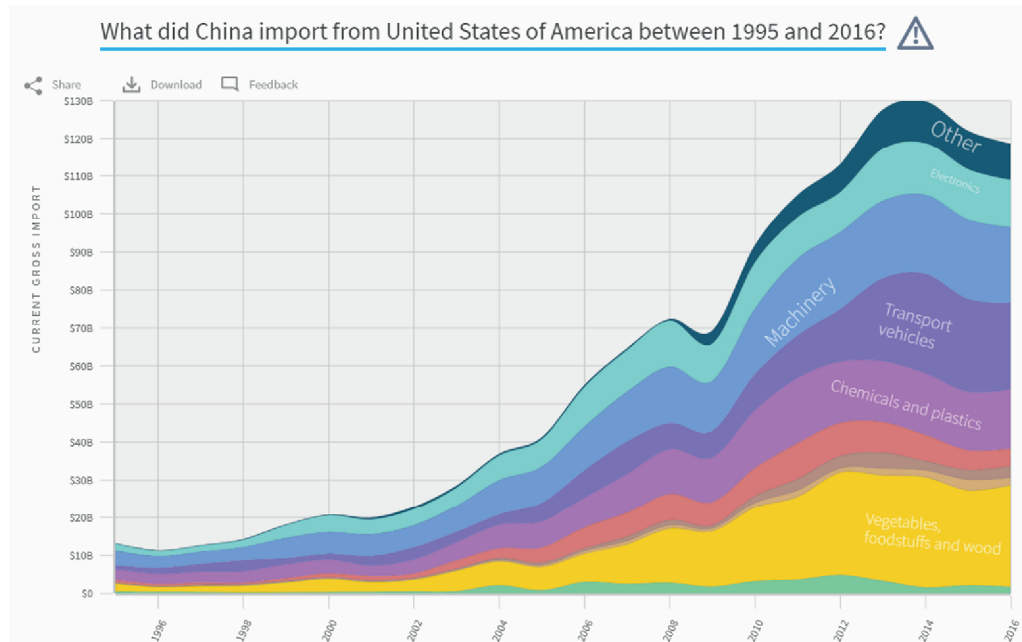


Figure 3: What did China import from United States of America between 1995 and 2016?  
Source: Center for International Development at Harvard University [2018b].

On the other hand, Chinese exports to the United States were recorded at \$429 billion in the same year, which is 3.6 times' their imports. Top Chinese exporting companies are Petro China (oil and gas segment), China Petroleum & Chemical (oil, gas), SAIC Motors (cars and trucks segment), China Shenhua Energy (diversified metals) and Fosun International (iron, steel). While not yet a part of the top 5, but with a significant annual export growth rate of 25.8%, global commerce giant Alibaba was expected to be part of this list in 2017 [Workman, 2017].

The Chinese machinery sector recorded the highest exports to the U.S. at \$123 billion with its main industries - computers (\$47 billion), toys (\$9.59 billion) and parts and accessories for office machines (\$8.74 billion). The second most important sector, electronics, accounted for US-directed exports of \$114 billion. Its main industries were transmission apparatus for radio, telephone and TV (\$33.2 billion), telephones (\$18.2 billion) as well as monitors and projectors (\$8.16 billion).

The third set of sectors was textiles and furniture with exports of \$86.6 billion; other furniture and parts (\$9.73 billion), seats (\$9.71 billion) and lamps (\$7.28 billion). In combination, these 3 categories accounted for the lion share of \$324 billion (75.5% of total export volume to the United States). The other sectors - chemicals and plastics (\$30.1 billion / 7%) and vegetables, foodstuff and wood (\$23.2 billion / 5.4%) only played a minor role.

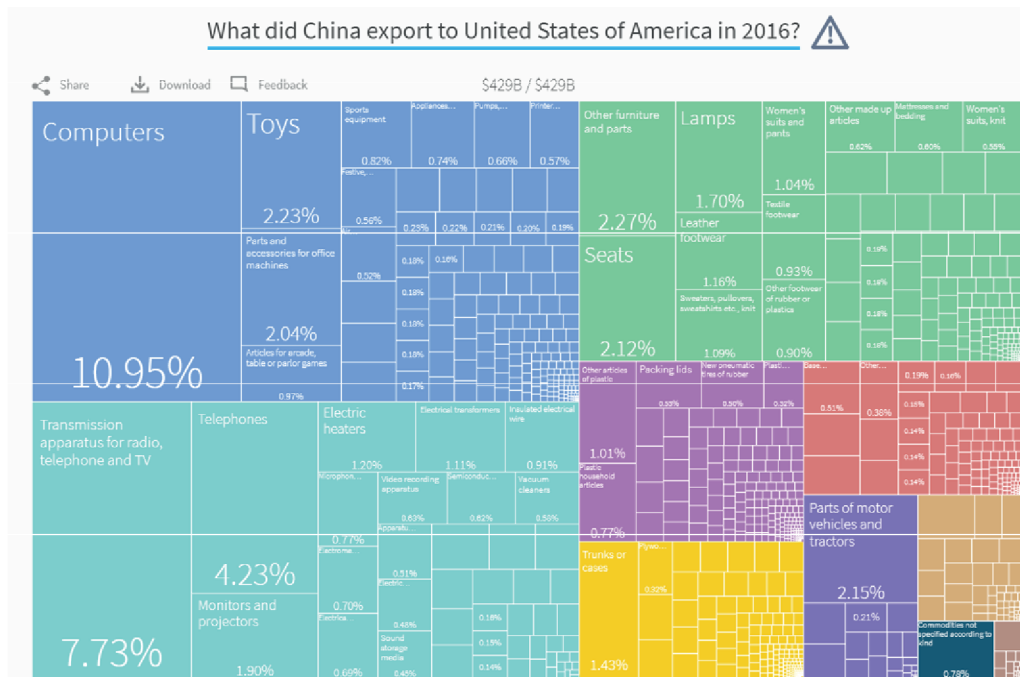


Figure 4: What did China export to United States of America in 2016?  
 Source: Center for International Development at Harvard University [2018a].

As can be seen in the figure below, textiles and furniture form the most important sectors in this statistic. Even though they have grown steadily, they were overtaken by electronics in 1998 and machinery in 2006. Both the latter segments recorded high growth rates in the 2000s that established them at a top position. Regardless of which year of the Atlas Globe you consider, since data recording began in 1995, these three sectors have always been by far the most important ones for Chinese exports to the United States. In terms of net exports (exports – imports) they account for \$299 billion of the \$368 billion trade surplus that China maintains with its Northern-American trade partner (81.3%).<sup>x</sup>

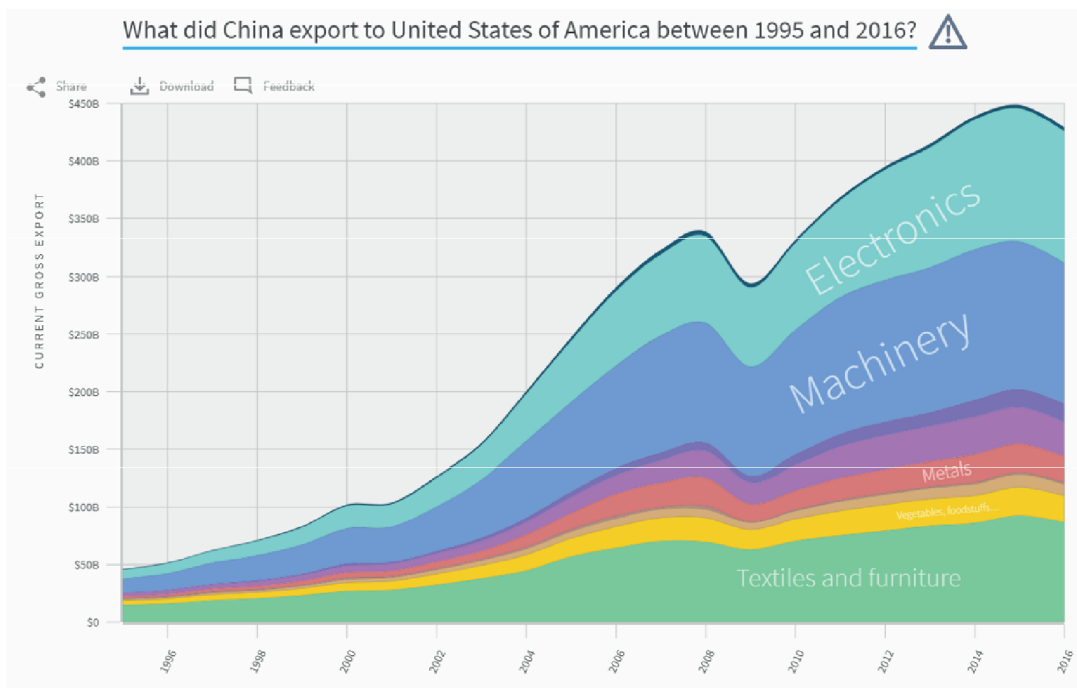


Figure 5: What did China export to United States of America between 1995 and 2016?  
 Source: Center for International Development at Harvard University [2018a].

## Recent Developments and Outlook

The recent tensions started when the Trump administration imposed tariffs on steel on all countries, except Canada and Mexico, on March 1<sup>st</sup> of this year. Taking a look at the global steel production shares (see table below), it becomes evident that even though it only accounts for 6% of U.S. steel imports, China was the main target of this measure. On March 23<sup>rd</sup>, a tariff on Chinese steel totaling \$3 billion came into force. Exactly ten days later, China retaliated with tariffs of the same amount and filed an official complaint to the WTO [Jiming & Posen, 2018]. Even after that measure, Trump spread optimism regarding the future trade relations of both countries, stating that he had good relations with Chinese president Xi Jinping and that “China will take down its Trade Barriers because it is the right thing to do. Taxes will become Reciprocal & a deal will be made on Intellectual Property. Great future for both countries!”<sup>xi</sup>

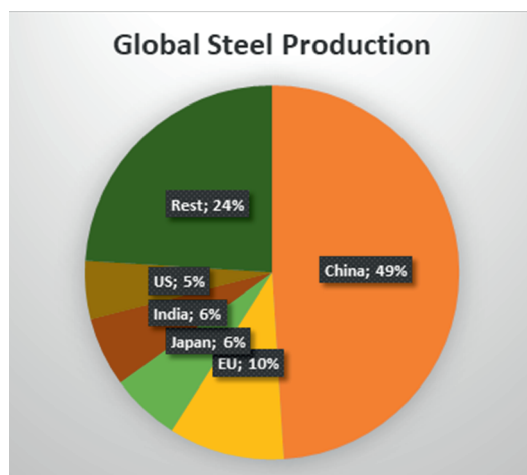


Figure 6: Shares of Top 5 Regions in Global Steel Production  
 Source: Authors' own research based on Petroff, A. [2018]

	United States		China
March 23	\$3 billion imposed	April 2	\$3 billion imposed
April 3	\$50 billion proposed	April 4	\$50 billion proposed
April 5	\$100 billion proposed		

Table 2: Tariff dynamics in April 2018  
 Source: Authors' own research based on data from Iyengar, R. [2018]

During the following months, further U.S. tariffs were imposed on flat-screen televisions, medical devices, aircraft parts and batteries [Bagshaw, 2018]. In response, China began targeting U.S. soybeans [Rugaber & Kang, 2018]. This back-and-forth of protectionist measures has continued throughout the last three months with the most recent one being executed on July 6<sup>th</sup>, when China imposed a new \$34 billion tariff on various U.S. products [Bagshaw, 2018]. The strategy behind these measures has become evident: the U.S. started targeting products of the machinery and electronics industries that were identified as the largest contributors to the trade deficit in the second section of this paper. The Chinese administration's responses were directed to the vegetables, foodstuff and wood segment, the key U.S. exports to China. Justifications trying to link the protectionist measures to national security concerns are merely pretexts. By now, the only goal has become to hurt the trade partner as much as possible and to create an advantage for home-based companies.

In the meantime, a public debate on what is right and wrong has arisen. Both countries blame each other for having escalated the situation: China refers to the fact that the United States administration was the first to impose large tariffs to deliberately hurt its partner, whereas the United States claims that China has been abusing the rules over the years. In their section 301 list attached to the report on the first wave of tariffs, the U.S. accused China of stealing U.S. intellectual property through four government-backed measures [Jiming & Posen, 2018]. Other claims are directed to market access restrictions for foreign companies, state-owned companies or governmental regulation of the Yuan exchange rate [Gerwin, 2018].

It is still difficult to predict where the trade war is heading. In theory, U.S. tariffs and China further opening up to global markets should reduce the bilateral trade deficit. Chinese consumption of U.S. goods should increase, boosting employment and purchasing power parity in the U.S., which would eventually also increase U.S. consumption. In the long-term, higher competition could improve both countries' GDP, making the short-term sufferings of the trade war pay off. However, the imposed tariffs will lead to increase in prices which could also cause global inflation. Furthermore, higher wages in the U.S. employment market will further result in a rise in inflation. This could lead to a new bubble in stock and property prices, similar to the financial crisis of 2008 [Jiming & Posen, 2018]. Nonetheless, in this scenario, the Chinese counter-measures are not considered. The past months have shown that China is ready to do whatever it takes in order to protect its export-related jobs and the inflows of foreign currencies.

The recent developments in trade relations are also expected to shape the future of the global economy: China is currently in the transformation process from being a global leader in low-skilled labor goods to becoming a leader in high-skilled labor extensive goods. As a part of its "Made in China 2025" strategy, it wants to build up R&D capacities, increase capacities significantly and obtain technologies in the sectors that are predicted to be of utmost importance in future, such as Internet of Things or Artificial Intelligence [Morrison, 2018]. Coincidentally, the United States is focusing on the same sectors. It will be particularly interesting to see if and how the two countries can collaborate in these future fields, or if a cold war-like race for technological leadership breaks out.

Summing up the discussed issues in this paper, U.S. - Chinese trade relations have always been characterized by two countries that co-existed well as long as they had the same interests. During the wars fought on different sides, bilateral trade relations were basically non-existent. That changed when the mutual goal of perpetuating globalization arose. Even though political and legal issues were always present, trade relations have taken a downturn since the Trump administration came to power and made these issues one of its priorities. At the moment, there seems to be a lack of common ground and a conflict of interests. However, in our dynamic, complex, globally interconnected world, it is not possible to predict where the trade relations are heading.

## Endnotes

- i United States Department of State [2018].*
- ii Stratfor Worldview [2007].*
- iii United States Department of the Treasury [2018].*
- iv European Commission [2018].*
- v Simoes, A. [2018]*
- vi United States Department of State [2018].*
- vii Center for International Development at Harvard University [2018a].*
- viii Center for International Development at Harvard University [2018b].*
- ix Center for International Development at Harvard University [2018b].*
- x Center for International Development at Harvard University [2018a].*
- xi Washington Associated Press [2018].*

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- [Last access to all sources on 07/07/2018]



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# Basel-III: Cost-Benefit analysis for Indian Banks

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## Abstract

After the financial crisis of 2008-09, Basel Committee on Banking Supervision (BCBS) suggested implementing the Basel-III accord, which is expected to increase the banking sector's ability to absorb shocks arising from macro-economic conditions. Basel-III mainly emphasizes the need for additional capital besides maintenance of liquidity and leverage ratios. The additional capital required will result in banks incurring an additional cost. Keeping this in mind, this study attempts to assess whether implementation of the Basel-III accord would yield the expected benefits.

This study quantifies the cost of Basel-III accord implementation to be incurred by Indian banks and macro-economic benefits expected to be derived from its implementation.

**Key Words:** *Basel-III, Cost-Benefit analysis, Financial Crisis*

## Introduction

After the Herstatt Bank incident of 1974, G10 countries formed the Basel Committee on Banking Supervision (BCBS) under the sponsorship of Bank for International Settlements (BIS). The committee introduced the Basel-I regulation in 1988, which was mainly based on management of credit risk. However, the 'one-size-fits-all' kind of approach of this accord failed to keep pace with banking innovations and gradually rendered it less effective and obsolete. In 2004, the Basel-II accord was introduced; this included market risk and operational risk in addition to credit risk, and was expected to prevent the banking system from the possible thrusts. However, the financial crisis of 2008-09, which severely impacted the global economy, proved this to be wrong. In 2010, the Basel Committee recommended the Basel-III accord, which is considered to be more effective than the earlier two accords. Basel-III is expected to provide sufficient liquidity while enhancing the banking system's shock absorbing capacity. The major recommendations made by Reserve Bank of India (RBI) under Basel-III for Indian banks are as follows:

- (1) Enhancement of the Common Equity Tier-1 (CET-1) capital to 5.5 percent; introduction of Additional Tier-1 as 1.5 percent.
- (2) Introduction of Capital Conservation Buffer (CCB) as 2.5 percent of Risk Weighted Assets (RWAs).
- (3) Introduction of Counter Cyclical Buffer in the range of 0-2.5 percent based on country specific economic triggers.
- (4) Leverage Ratio i.e. Ratio of Tier-1 capital to off- and on-balance sheet exposure to be maintained at a minimum of 3 percent.
- (5) Long term liquidity ratio i.e. Net Stable Funding Ratio (NSFR) and Short term liquidity ratio i.e. Liquidity Coverage Ratio (LCR) to be maintained at 100 percent.

## Research Gap

Review of literature reveals that most of the earlier research primarily covers developed countries. A number of studies have assumed that cost of additional capital will be passed on to prospective customers by raising the price of loan products. In this study, the expected rate of return on investment is considered as the cost of capital and accordingly, the total cost for raising additional capital has been computed. Some research work has been carried out to compute the cost-benefit analysis for Indian banks with respect to Basel-III implementation. However, the study doesn't quantify the amount in numerical terms. Since Basel-III regulations are yet to be implemented fully in India, it's important to study the associated costs and probable benefits of its implementation.

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## Methodology

Data available from the Basel-III disclosures made by 41 banks (both private and public sector banks) for the year 2016 has been considered as the base. Indian banks are required to achieve the Common Equity Tier-1 (CET-1), Tier-1 and Total Capital ratio of 5.5 percent, 7 percent and 9.5 percent of Risk Weighted Assets (RWAs) respectively besides maintaining Capital Conservation Buffer at 2.5 percent. Assuming per annum growth of 16 percent for RWAs, the required amount of CET-1, Tier-1 and Total Capital by year 2019 has been computed. The difference between presently available amount of CET-1, Tier-1 and Total Capital and required amount by 2019 was taken as additionally required capital by Indian Banks by 2019.

The benefits are computed on the basis of prevention in fall of Gross Domestic Product (GDP) due to presence of Basel-III regulations by 2019. As per a study conducted by International Monetary Fund (IMF) in 2009, the effect of a financial crisis lasts for 7 years; for the first five years, the fall in GDP is 10 percent each year and for the next 2 years, the fall in GDP is 2.5 percent. Accordingly, the level of GDP for the year 2017 was considered as the base, which is expected to grow at 8 percent per annum in the absence of any financial crises. However, in case of a financial crisis, it may lose the growth opportunity while experiencing a downfall as per the study conducted by IMF.

A comparison was made in numerical terms between the additional capital required to comply with Basel-III regulations and the possible opportunity loss for future years in case of a financial crisis occurring in the year 2017. Similarly a comparison was made between the present values of additional capital required and possible future loss in GDP.

## Findings

The additional cost to comply with Basel-III computed from the above-mentioned methodology is INR 5.5 trillion and its present value is INR 4.7 trillion whereas total loss in GDP for the next seven years is INR 53.36 trillion and its present value is INR 45.9 trillion. If we consider the opportunity loss as well, the total loss in GDP for the next seven years due to financial crisis is INR 585.64 trillion and its present value is INR 436.08 trillion. Thus, implementation of Basel-III regulations is quite justifiable in terms of associated costs and benefits expected to be derived.

## Applicability of Basel-iii Accord In Context To The Indian Economy

Compliance with Basel-III norms is expected to reduce the possibility and severity of a financial crisis on the banking industry and enhance financial stability of the system. India needs a robust banking system as it is one of the fastest growing economies of the world. A well-functioning and efficient banking system is the basic need for the accomplishment of the recent initiatives of the government of India including financial inclusion, Direct Benefit Transfer (DBT), etc. Compliance with globally accepted standards will help Indian banks to remain competitive at the international level. Suggested guidelines under Basel-III such as maintaining a specified amount of shock absorbing capital, ensuring sufficient liquidity and control over excessive debt build-up during boom periods, etc. will enable the Indian banking system to withstand a major crisis, if any, in future.

The Indian banking system is presently facing an excessive pile up of Non-Performing Assets (NPAs) amounting to approximately INR 10.36 trillion. Compliance with globally accepted Basel-III regulations would not only keep the lending activities under strict control, but also serve the purpose of capital conservation. These regulations are expected to provide micro level resilience to individual banks in the time of stress, and being pro-cyclical in nature on the macroeconomic front, they will address system-wide risks.

## Conclusion

It is evident from the information presented that benefits to be derived from implementation of Basel-III regulations outweigh the associated costs of implementation of these regulations. Thus, the implementation of Basel-III accord is justifiable in the given circumstances. However, as a promoter of Public Sector Banks (PSBs), the Government of India (GOI) may find it difficult to provide capital for all the PSBs. As a logical measure, the GOI may decide to dilute its equity holding through various measures and infuse capital to the extent of its shareholding post equity dilution. The option of consolidation of a few weaker banks with larger and stronger banks in terms of capital can also be explored.

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