

A Sustainable Technology to Improve Productivity to aid Economy.

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Abstract: The planned commuting time in a global average is 25 to 35 minutes for a eight hour workday. However, the Indian Urban spaces consume more time commuting. The paper considers attrition and unemployment rates in India. The paper talks of a blackbox systems approach to the problem of commuting times for an opportunity, in Urban spaces. Thus, the systems approach proposes a solution in information and communication technology, thereby contributing to the growth of economy.

Keywords: Commutation; travel-time ratio; systems approach.

Introduction: As knowledge expanded, the discipline of engineering has diversified into more than a dozen branches, each with its specializations and limitations[1].A new approach was needed to overcome the limitations of each specialization, thus offering generic concepts and guiding principles valid in all fields of scientific investigation, called systems approach[1]. A systems approach simplifies a problem, to a multi-level hierarchy of manageable internal contributors and external subcontractors of diverse expertise[1].The problem addressed in this article is commutation time for an opportunity.

Literature Survey: Research in Information and Communication technologies is a proven economic growth factor of 21st century.ICT reduces costs, to effectively transform inputs into outputs and provide new products to the marketplace[2]. When time and monetary costs consists of the commuting time, for an optimum travel speed, the commuting time paradox states that the average commuting time remains constant in the long run, while speed and distance will increase [3].Workers, on an average spend 10.5 percent of the time available for work and travel on commuting[4].Across the world, the average home-to-work trips range from 25 to 35 minutes, with individual commuting times varying the transport mode[4].The global planned time travel ratio is 28 min for eight hour workday[4].

Methodology: The mean travel-time ratio from a suburb to core city, by spatial context, is 0.133[4]. The commutation times in global cities for an opportunity, is a demanding problem to be addressed. A systems approach to this problem of commutation time would resolve it into a blackbox product. The product should be able to provide an interface between different entities irrespective of geographical constraints. The product would be a software tool to be utilized in personal computers or smart phones. Thus, an opportunity could be availed from personal spaces with the aid of technology, thus improving productivity of a given society. Also, the online tool would generate revenue in a given economy. Already, many such online tools are available viz google duo, google meet, skype etc.

| Parameter | Value recorded |
|--|---|
| Indian work force[5] | 400 million |
| Annual addition to work force[6] | 110.28 lakhs |
| Attrition rate[7] | 23.5 percent |
| Highest Unemployment rate[8] | 8.20 percent |
| Employment Rate[8] | 50.8 percent |
| Retirement Age[8] | 60 |
| Number of times tool utilized annually | $(0.235)*(40*10^7) + 0.0820*1.1028*10^7 = 9.49 *10^7$ |
| Economic value at 10 rupees each opportunity | 94.90 *10^7 indian national rupee |
| Work hour savings per opportunity, in India | 8 hours |

Table 1: Indian workforce parameters

| Indian govt Sustainability Goals [9] | Observed dimension |
|---|--|
| Goal 8- Decent Work and Economic Growth | Increased Productivity and revenue due to more availability of work hours |
| Goal 9- Industry, Innovation and Infrastructure | The online tool is an innovation in soft infrastructure of any industry |
| Goal 11- Sustainable Cities and Communities | The online tool facilitates less commutation, helps reduce carbon emission. Thus, cities become more sustainable |
| Goal 17 – Partnership | A third party could help organize smooth utilization of the online tool |

Table 2: Achieved dimensions of the govt sustainability goals

Conclusion: The paper states the economic importance of research and development in the area of communication technologies. The rapid growing information technology sector paves a way for economic growth and better work-life balance. The economy generated considered the attrition rate and the unemployment rate in India. More revenues could be generated by dynamic pricing instead of a flat rate, depending upon the importance of the resource person. However, the apprehensions about an opportunity could be resolved in the end-to-end encryption needed to maintain the secrecy of the board room. The panel discussions in journalism show an additional opportunity to the economic growth of the said technology. However, the server requirements are to be taken care of, in the prime time.

The said technique in the paper also meets many sustainability goals of the government. Thus, the said technology gives a direction to the workforce to become more productive in a sustainable way.

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