



Smart cities, digital connectivity and social inclusion: paving the way to inclusive urban strategies

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The international economic landscape has been characterised by an increasing concentration and integration of economic activities over the last decades. Cities – and especially large metropolitan areas – have become key players in the global economy [1], with only 600 cities contributing to 60% of the world's economic output [2]. Urban concentration will increase at faster rates in the coming years (especially in the developing world) with the proportion of world's population living in urban areas rising from 50% today to 75% in 2050. However, the negative externalities of urban development have also long been acknowledged: urban concentration generates congestion costs (rising housing prices, high transportation costs), environmental costs (air and water quality), and has a negative impact on social cohesion (gentrification, rising inequalities, social exclusion, crime).

As a response to these challenges, more attention has been given to inclusive and sustainable urban modes of development that would reconcile the objectives of sustainability and economic competitiveness. The concept of smart cities has gained in popularity among policy-makers over the last two decades. This new framework for urban policy emphasises the positive impact of investment in new technologies and urban digital networks in enhancing city's economic development and securing more equitable outcomes for the local population. Such results are achieved by facilitating synergies between different parts of the urban eco-systems (governments, citizens, economic actors and the non for profit sector) through an increased connectivity. The cheap availability of Information and Communication Technologies (ICTs) and the rapid penetration of digital technologies in all economic sectors have encouraged this trend [3].

Smart initiatives have flourished in both the developed and the developing world over the last two decades, with now 130 localities worldwide implementing smart city projects. For instance, the UK department of Business, Skills and Innovation has recently launched a new 40 billion initiative to support investments in ICT and digital connectivity in UK cities [4]; in Southeast Asia, the city of Singapore has launched its IT2000 plan to create an 'intelligent island'; Rio de Janeiro, in partnership with IBM, has launched several programs using ICTs to tackle endemic crime, forecast natural disasters and manage transportation systems in a more efficient way.

However, the policies that were implemented under the « smart city » banner have also been depicted as fundamentally top-down, technocratic and elitist in their design and implementation. Some observers highlighted the smart city concept's lack of clarity and the resulting difficulty to operationalise it for policy purpose. Besides, the emphasis on ICT has led to the implementation

of one-size-fits all recipes focusing on investments in communication networks and embracing a business-led model of development [5]. This has been severely criticised and described as favouring efficiency at the expense of other important objectives such as equity and the local population's quality of life [6]. Massive investment in the development of digital tools and ICTs need to be accompanied with policies aiming to enhance people's digital education, and incentivise the use of these technologies. For instance, Brazilian officials have noted that despite Rio's award for best "smart city" in 2013, the local population was not fully aware of the opportunities represented by recent investments in the city's digital connectivity [7]. Moreover, focusing investment efforts on hard ICT infrastructures might even increase the urban divide and strengthen spatial segregation, creating high tech enclaves within cities – especially in developing and emerging countries [7]. Many economic geographers and urban planners have insisted on the limited effects of enhanced connectivity (whether digital or physical) on economic performance, if not supplemented by long-term user-led development strategies aiming to strengthen people's and firms' absorptive capacity [9]. Besides, they also advocate for policy programmes targeting marginalised populations and supporting enhanced social interactions (social capital) [10]. In a knowledge based economy, innovation is the main driver of city's economic performance, and it is the product of repeated interactions between actors at the urban scale [11]. In that perspective, once smart infrastructures are in place, smart strategies should aim to improve people's and local firms' ability to grasp the potential benefits of these new technological and networking opportunities. This implies embracing a holistic vision of the urban landscape and involving the whole network of actors in the urban eco-system in the design and implementation of intelligent urban policies. Stakeholders' participation can be enhanced by new technologies but will not automatically stem from it. More comprehensive policies are emerging worldwide, and draw on the use of communication technologies to enable citizens' participation in decision making, facilitate cooperation between actors, and support the local economy (urban action forums, hyper-local websites, community services, digital divide programmes, etc.) [12], but they will take longer to deliver their expected results.

References

- [1] Taylor, P.J (2001) Specification of the world city network. *Geographical Analysis* 33(2), 181–194.
- [2] Dobbs, R., Smit, S., Remes, J., Manyika, J., Roxburgh, C., and Restrepo, A., (2011), *Urban world: mapping the economic power of cities*, Report, McKinsey Global Institute

- [3] Cohen, G., Salomon, I., Nijkamp, P., (2002) Information-communications technologies (ict) and transport: Does knowledge underpin policy? *Telecommunication Policy*, 26: 31-52
- [4] Department of Business, Innovation and Skills, (2013), Smart city market: UK opportunities, BIS Research Paper number 136
- [5] Hollands, R., G., (2008), Will the real smart city please stand up?, *City: analysis of urban trends, culture, theory, policy, action*, 12:3, 303-320
- [6] Graham, S., and Marvin, S., (2001), *Splintering urbanism: networked infrastructures, technological mobilities and the urban condition*. Routledge London
- [7] Smedley, T., (2013), The new smart city – from hi-tech sensors to social innovation, *The Guardian*
<http://www.theguardian.com/sustainable-business/smart-cities-sensors-social-innovation>
- [8] Graham, S. (2002): «Bridging urban digital divides? Polarisation and information and communications technologies (ICT)», *Urban Studies*, 39 (1):33-56.
- [9] Cohen, W.M., and Levinthal, D., A., 1990. Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly* 35 128-152.
- [10] Caragliu, A., Del Bo, C., and Nijkamp, P., (2009), Smart cities in Europe, CERS, 3rd Central European Conference in Regional Science Paper
- [11] Storper M., and Venables A., J., (2004) Buzz: Face-to-face contact and the urban economy. *Journal of Economic Geography*, 4, 4: 351–370
- [12] Hodgkinson, S., (2011), Is your city smart enough? Digitally enabled cities and societies will enhance economic, social and environmental sustainability in the urban century, OVUM report

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