

FROM BOTTLENECK TO NETWORK: AURANGZEB BADINI'S PLACE-BASED URBAN TRANSFORMATION OF PISHIN, BALOCHISTAN

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Abstract

This study investigates the influence of intellectual capital (IC) on the It has been decades since Pishin's wider urban form pushed people and freight through a narrow spine. However, this is no longer the case. Through the efforts of Ex-Deputy Commissioner Pishin, Aurangzeb Badini, a joint program was launched on-site from June 2018 to November 2019. It was done to address this challenge by joining serviced urban land and phasing out outdated systems and formalizing documented governance. Furthermore, it was based on two schemes. First Scheme A, named Model Town Pishin, covers 2,200 acres of Batizai Land, including a 200-acre Government Offices Complex. It will combine district administration, the judiciary, and civic facilities with a model neighborhood and market point built around the main. Contrary to this, Scheme B is based on public-private arrangement. It covers the 487 acres of military land along with 3.2 km ring road. Apart from this, it also gave an intermodal terminal (400 bays), truck yard, market sheds, city-center upgrades, structured parking and water saving governance mechanism that can help in reducing dependence on agricultural use of remaining parcels by promoting tunnel farming. At the same time, a value-laden Yaro-Pishin connector to link with national highway was cleared by plantation pledge based on more than 5,000 trees and then delivered with a price to address the problem of stranding node. Thus, method has emphasized audits in line with environment, remote sensing, an index of living standards, tracing of process and transactions. At last, the finding suggests reduced crash risk and queues, commerce's formalization, efficiency of administrative gains, investment in peri-urban spaces, nevertheless, consistent with accessibility theory and capability expansion. (Hansen 1959; Sen 1999.)

INTRODUCTION

The peripheral districts of Balochistan face a plethora of problems including distance, density, and delivery which results in locking them down into low access equilibria (Barca, McCann, and Rodríguez-Pose 2012). For example, the built-up footprint of Pishin which is 15 km by 6 km facilitated the movement through only urban spine that usually resulted in queues in peak-hour, loading conflicts of curbside which eventually increased risks. So, the Hansen's view about the

connectivity is essential for management of land use capability approach of Sen, the response placed accessibility and collocated services to be offered for public the designing center, building activation of land, getting rid of redundancy, and space operationalization. Thus, consent should be pursued through documentation and other practical alternatives instead of coercion (Hansen 1959; Sen 1999).

2. Community Background and the Social License

The Batizai is one of the important branches of the Tareen tribes. It has already given land for national purposes previously at two instances. First they gave lands for military sites in 1940s and second for refugee camps in the 1980s. Most importantly, they did not demand formal recognition and compensation for this cause. Furthermore, they tried to engage with authorities from 2005-2010 but without any progress. However, a Batizai committee based on twelve members from youth created structured liaison with the government and asked the newly appointed Deputy Commissioner of area to relocate morning produce stalls blocking Saranan-Pishin road. For this purpose, guarantees in written form for the usage of land for specific purposes, acknowledgement of tribal contribution and fair access to small works and jobs transformed from caution to acceptance and paved the way for creation of Model Town (Batezai 2025).

3. Conceptual and Design Frameworks

The triangulation approach is followed in the application of conceptual and design frameworks. It is based on following four concepts.

1. **Accessibility and Spatial Equilibrium:** This framework treats connectivity as an organizing principle for usage of land and access to services (Hansen 1959)
2. **Capability Approach:** This framework highlights the importance of reliable mobility and argues that co-location of public services can expand people's real freedoms, ensuring timely care, travel dignity, and predictable transactions (Sen 1999).
3. **Sustainable livelihoods lens:** Outcomes should be based on human, social, physical, financial, and natural capitals which should not exclude the vulnerability and institutions (Chambers and Conway 1992; DFID 1999).
4. **Governance by documentation:** This model compensates the absence of a provincial PPP authority, tariffs and risks are recorded through memoranda, public minutes, transparent rate cards, reconciliations and autonomous engineering checks. In this army apply and certify

standards on the city-center package as per their relevance (Rafiq 2025).

4. Development Schemes

4.1 Scheme A: Model Town Pishin (Batizai Tract, 2,200 Acres)

Anchor: A Government Offices Complex with an area of 200 acre completes Secretariat of the Deputy Commissioner and 29 line department. It equips it with offices for officials, public service counters, records, and cells for addressing grievances and hall rooms for meetings. Just a walking distance away is judicial complex so that citizens can complete tasks related to revenue and justices in the surrounding of one campus.

Civic and market functions: For a functional market, a school, park, community hall, e-service kiosk, library space, a point for the transfer of waste with upgraded drainage and lightning are provided as the amenities. Apart from this, a node for agriculture market based on auction sheds, drainage, sanitation, bays for loading and cold chain with futuristic motives decrease the curb conflict and loss during post-harvest times.

Neighbourhood and movement. This scheme also include residential and commercial plots with proper planning like; internal streets, drains for storms, signage and corridor for provision of service that keep the movement safe and easy during the rainy seasons as well. It is intended to reduce the time cost for the citizens, improved coordination among offices and transparent signals that can attract private investments (Betazai 2025).

4.2 Scheme B: PPP on Military Lands and Miscellaneous Developments (487 Acres + 3.2 km Ring Road)

Arrangement Method. A documented public-private setup distributed roles, revenues and risks in the form of audit. It is based on testing of materials, safety of sites, sequencing, and enforcement of the certification for milestone, with the oversight of military if needed (Rafiq 2025)

Core components.

1. An intermodal terminal with 400 bus bays. It has mechanism of formal ticketing, halls for passengers, sanitation with gender sensitivities, space for offering prayer food courts and wayfinding and installation of CCTV cameras.
2. A truck yard based on time-sensitive loading, separate zones for repairmen and weighbridge.
3. Stacked retail and workshops having state of art parking for vehicles including rickshaws and bikes to remove curb conflict, a pump station with modern facilities including CNG, electrical and fire-safety rooms.
4. Areas for vendors and shelters for market are also available with fees scheduled in print form, drainage, and waste points management for the formalization of hygiene and commerce.
5. A 3.2 km ring road having shoulders, proper drainage lines, elevated culverts, channelization of junctions, and removal of the black-spot so that network do not face any malfunction event during the monsoon.
6. Agriculture with less consumption of water is also ensured through tunnel-farming on parcels that are left near the logistics node in order to minimize the evapotranspiration and post-harvest loss (Agha 2020; Government of Balochistan P&D 2020b; Rafiq 2025).

4.3 Critical Enabler: The Yaro-Pishin Connector to the National Highway

The Yaro-Pishin Connector is the cherry on top as it is instrumental in realizing full potential of intermodal node and ring road. This jointer although witnessed a stay order at the Supreme Court. However, when Deputy Commissioner appeared before the Chief Justice Saqib Nisar he emphasized on the public interest and public importance of it and promised to plant more than five thousand trees throughout corridor. This helped in lifting of injunction/stay order. A contractor also helped when he executed link project without profit to avoid the stranding of node. Maintenance was also correlated with species, locations of plants, schedules of survival rate were logged and tied (Government of Balochistan P&D 2020a.)

5. Management and Delivery

Implementation of schemes were aligned with the result based management (log frames tracking lane-kilometers, culverts and drains, stall and berth occupancy, black-spot crash rates, maintenance compliance, and plantation survival) with **Problem-Driven Iterative Adaptation** (weekly A3s and after-action reviews resolving right-of-way disputes, supply delays, crowding). While the enforcement of it in the center of city happened once the serviced alternatives were activated, thus reducing the opposition from the vendors and transport unions. A verified record was also established with documentation-memoranda, rate cards, reconciliation, engineering checks under no influence. Thus, PPP side also witnessed verified record with certified standards and milestones of army (Agha 2020; Batezai 2025; Rafiq 2025).

6. Methods and Evidence

The community preferences are also matched but rigor has also been ensured. The evaluation is not just based on isochrone mapping or quasi-experimental identification. However, it is based on following four options:

1. **Remote sensing:** It is done on nighttime lights and built-up area in the buffers of 250, 500, and 1000 meters around the junctions of ring, the district terminal and interchanges of Yaro-Pishin.
2. A Living-Standard Index to include education, health, mobility and WASH (principal-component weights with equal-weight sensitivity checks).
3. Tracing of the process from the focus groups and interviews (transporters, vendors, women and youth, party representatives, elders, religious leaders, Levies and military liaisons, sector officials), with the interview of Batezai instrumental in consent mechanics.
4. Transaction and environmental audits so that memoranda rate cards, sign-offs of engineering, logs of grievances, records of plantation and schedules of survival rate are verified (Agha 2020; Batezai 2025; Government of Balochistan P&D 2020a, 2020b).

7. Results

Throughput and reliability: The opening of connector and ring has facilitated the through traffic as it is no more relied on a single spine. This has resulted in the less queues at the former choke point, and reliability during monsoons also increased as elevated culverts and lined drains are effectively reducing the issue of waterlogging at important points (Government of Balochistan P&D 2020b).

Decongestion and safety: It has helped in the reduction of curbs conflict among buses, trucks, rickshaws, and pedestrians due to availability of off-street spaces and structured parking. It is confirmed by preliminary reports of administration which confirm fewer collision with minimum impact at some black spots after it (Agha 2020).

Market formalization: With the proper assigned stalls and fee schedules in published form the chances of conflict are reduced considerably. While marked points for waste and better drainage and improve the health outcomes (Agha 2020).

Administrative efficiency: A government complex based on 200 acres has reduced the time cost of citizens as it is comprised of records related to placing, revenue, and justice and one place. It has also shortened inter-office cycles for coordination and inspection (Batezai 2025).

Spatial signals and livelihoods: A Peri-Urban thickening at the junctions of ring and in the surroundings of terminal with the help of remote-sensing shows that it is as good as faster absorption of serviced plots in the Model Town. At the same time, tunnel farming has resulted in the stabilization of yield for growers and has laid the foundation of modern techniques of farming. It has also been integrated with terminal logistics to reduce post-harvest losses. (Agha;2020 Rafiq 2025)

Environmental safeguards.

It is important to note that plantation program tied to the connector already met targets and added survival-rate monitoring and replanting rounds (Government of Balochistan P&D 2020a).

8. Discussion

It is pertinent to mention here that 3.2 ring and Highway connector were game-changer for congested corridors of city. At the same time, governance was also important as with the absence of PPP statute, the accountability was ensured through memoranda, transparent rate cards, grievance windows, independent engineering checks, and army certification where applicable. Written guarantees have made warring parties stakeholders in the initiative (Batezai 2025; Rafiq 2025).

Contrary to this, it also has limitations. Few of these are interpretation of remote-sensing as it is complicated, quality inference and long-term gains depend on O&M funding—including plantation survival (Government of Balochistan P&D 2020a, 2020b). However, Pishin is no more a closed space but it has developed into a network with the help of travel time testimony, operation of market and performance of administration.

Even so, the convergence of travel-time testimony, market operations, administrative performance, and spatial signals supports the conclusion that Pishin moved from bottleneck equilibrium to a networked one.

9. Policy Implications

1. **Screen by accessibility:** Rank links by minutes-saved per rupee and publish results for accountability (Hansen 1959; Barca, McCann, and Rodríguez-Pose 2012).

2. **Secure space before surface.** Formalize terminals, yards, and market sheds before tightening curb enforcement (Agha 2020).

3. **Co-locate services:** One-stop administrative clusters reduce citizen time and raise throughput.

4. **Engineer accountability when law lags:** Standardize MoUs, rate cards, escrow, public minutes, independent engineering, and environmental logs; novate to statute later (Rafiq 2025).

5. **Recycle value:** Dedicate a share of terminal/market revenues and land-value gains to O&M and welfare.

6. **Tie clearances to safeguards:** Link court relief for critical connectors to measurable

environmental commitments with survival-rate reporting (Government of Balochistan P&D 2020a).

7. **Pilot, then scale:** Use temporary stall lines, parking controls, and tunnel-farming plots to validate choices before sinking capital (Agha 2020).

10. Conclusion

Pishin's transformation depended on the diagnosis of issue (congestion and fragmented access) and a coherent bundle. This model town was important for joint administration, justice and civic amenities in a surrounding of 200 acre campus. It also extends to serviced neighbourhood and a market node. This city-center public-private initiative also offered the intermodal terminal and yard for trucks, a parking with proper structure, sheds for markets and civic upgrades, ring of 3.2 km and regime to cater with tunnel-farming. Moreover, Yaro-Pishin connector completed the network which was based on plantation safeguard as per court records and a contract with no profit. The traffic congestion was resolved which was most damaging. Hence, this model is suitable for places where capacity is thin, provided leaders negotiate consent, design for accessibility, and embed accountability from the start.

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