

Factors influencing the RPCSC covered in the literature

Source	Factor	Number of factors
[16]	Loss of skilled workforce , Variations and/or rework , Communication breakdown/issue, Transport disruptions including port stoppages , Safety issues , Quality loss, Supply-demand mismatch/shortage , Inadequate supplier selection, Information loss, Technology failure, Implication of new laws/regulation, Industry/market pressures, Inadequate IT systems, Systems/machines breakdown, IT system failure, Disruptions due to outsourcing, Price fluctuations, Cost overrun, Political economy changes, Labor strikes, Physical damage to the buildings/accidents, Exchange rate fluctuations, Information misuse, Liability claims	24
[18]	Poor supply chain planning, Poor communication between stakeholders, Poor workflow control	3
[19]	Low productivity, Various of traffic restrictions	2
[26]	High cost due to discordant scale, Unintegrated industry chain, Insufficient construction capacity, Lack of well-developed technical system, Lack of R&D input, Insufficient integrated design capacity, Low-level of whole-decoration, Low-level of general contracting, Lack of industry team, Lack of practice and experience, Lack of new management method for prefabricated construction, Lack of a synergetic information platform	12
[27]	Competitive pricing setting, Complex consenting process, Lack of access to financing solutions, Poor delivery systems with longer lead times, On-site carnage constraints, Stakeholders' lack of awareness, High on-site engagement, International competition, Skilled worker shortage, Economies of scale, Unoptimized and less precise manufacturing, High design variability, Poor off-site payment mechanism, Unavailability of technical support, Inappropriate business strategies, Inappropriate business strategies, Slow adoption of advanced digital technologies, Intensive capital investment, Lacking resilience capacity,	19
[33]	Stakeholder fragmentation and management complexity, Higher initial capital cost, Poor supply chain integration and disturbances, Delays in delivery of modular components to site, Poor government support and regulations, Lack of MiC codes and standards, Defective design and change order, Supply chain information gap and inconsistency, Inefficient scheduling, Limited MiC expertise and experience, Shortage of modular components, Complex interfacing between systems, Weather disruptions, Transportation restrictions (size & weight), Inexperience of contractors in Mic, Skilled labour requirement, Modular installation errors and	30

	complex rectification, Poor cooperation and communication among project participants, Modular design complexity, Unsupportive planning and building regulations, Limited capacity of modular manufacturers/suppliers, Manual handling of heavy modular components, Absence of standard modular components, Unable to freeze design and specification early, Higher prices of modular components, Diseconomies of scale and longer break-even period, Modular production system failure, Lack of best management practices, Inaccurate cost estimation, Geometric and dimensional intolerances	
[34]	Inclement weather, Late deliveries, Labour productivity Fluctuations, Crane malfunctions	4
[50]	Policy and regulatory risk, Country norms and standards risk, Competitive risk, Market risk, Natural disaster risk, Economic risk, Consumer cognitive risk, Information technology platform construction risk, Interest distribution of rational risks, Information sharing degree risk, Information transmission deviation risk, Risk of trust, Risk of cooperation mechanism, Strategic goals consistency risk, Technical and solution matching risk, Professional and technical personnel lack risk, Technological innovation risk, Risk sharing risk, Risk of production technical capabilities, Logistics operation risk, Supply chain structure risk, Risk of supervision and management mechanism, Production organization and procurement risk, Communication and coordination risk, Enterprise scale risk, Satisfaction risk of collaboration between enterprises	30
[56]	Cost of technology investment share	1
[57]	Information sharing management, Real-time control of scheduling, Information traceability	3
[60]	Transaction costs	1
[65]	Supply chain processes coordination	1
[66]	Information integration	1
[67]	Supply chain coordination	1
[68]	Resourcefulness, Flexibility, Capacity, Adaptability, Efficiency, Financial strength, Visibility, Anticipation Dispersion.	9
[69]	Flexibility, Capacity, Efficiency, Visibility, Adaptability, Anticipation, Recovery, Dispersion, Collaboration, Market position, Security, Financial strength	12
[70]	Transport disruptions, Systems or machines breakdown, Supply–demand mismatches or shortages, Site logistics, Safety issues, Quality loss, Loss of skilled labor, Financial vulnerabilities, Inadequate IT systems	9
[71]	Production and outsourcing plan	1
[72]	Procurement process, Operation efficiency, Relationship	5

	coordination and strategy alignment, Corporate social responsibility	
[73]	Prefabricated component diversity, Standard modular coordination, Conflict resolution	3
[74]	Performance and construction technology of prefabricated components, Local government policy preferences, High upfront investment, A lack of highly skilled workers, Insufficient transportation supply capacity	5
[75]	Design change, Inefficient design approval, Delayed payment, Design errors, Poor communication with other project participants, Delayed delivery of precast elements to the site, Component identification marking errors, Unclear component identification marks, Precast components mistakenly delivered, Poor factory layout management, Component damages, Poor quality of components, Long component lead time, Long component lead time, Slow response to design change, Lack of skilled labor, Safety accidents, Inefficient verification of precast components due to unclear labels, Labor dispute, Poor site layout management, Tower crane breakdown, Installation error of precast elements, Delayed assembly schedule, Inadequate professional preplanning studies for project, Transportation vehicle damage, Traffic accidents, Prolonged custom declaration, Bad weather, Excessive approval procedures, Governmental policy change	30
[76]	Enormous difficulty for return on high initial investment, Cost disadvantages due to higher performance materials cost, Few chances to get preferential policies on tax, loan, and subsidy, Incompetence of designer, manufacturers and suppliers of prefabricated components, Lack of experiences of current contractors or subcontractors on assembly prefabricated components, Lack of quality monitoring on prefabrication components by professional institution, Loss due to insufficient law for industrialized building, High cost pressure without economics scale effect, Rapid growth of skilled labor cost, Terminal user's conservatism and skepticism, Monopoly of techniques by a few firms, Poor cooperation between multi-interface, Lack of management practices and experiences, Unreasonable site layout of prefabricated components, The regular need for mobile crane to lift large load components, Monotony of structure type, Poor skills assembling and hoisting precast components on site, Inability to modify design scheme during construction stage when needed, Errors and defects due to poor design ability of designers, Inappropriate design codes and standards for industrialized building, Damage of prefabricated elements during transportation access to the building site,	24

	Incompetence of technology, Equipment, Durability of prefabricated unproven	
[77]	Force majeure, Geological and climatic conditions, Changes in policies, regulations and standards, Information sharing risks, Inconsistent strategic goals of supply chain members, Design change risks, Suppliers' failure to deliver on time or insufficient supply, Insufficient assembly experience, Improper protection of component transportation, Different levels of integration of building components, Insufficient technical capability of building component production, Supply chain structure, Supply chain capacity, Supply chain complexity, Supplier level, Logistics support level, Inventory management, On-site lifting flexibility, Visibility, Environmental risks, Market stability, Risk management level, Information technology level, Fund dispatch, Emergency response plan, Organization management	26
[78]	The uncoordinated or unmatched of logistics and information flows	1
[79]	Cooperative innovation	1
[80]	Environmental risk, Political and legal risks, Market risk, External risk, Organization management risk, Manufacturing risk, Recycling risk, Information risk, Cooperation risk, consistency, raw coverage, unique coverage, Solution consistency, Solution coverage	14
[81]	Dynamic transportation planning	1
[82]	Number of component factories, Management of component manufacturers, Component production technology capabilities, Redundancy of components, Transportation capacity, Transportation redundancy, Storage capacity, Assembly construction capacity, Construction technology assembly, Risk emergency management capability at assembly construction site, Information sharing, Information oversight, Application of information technology, Trust, Adaptation, Collaboration, Commitment	17
[83]	Buffer space hedging	1