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The Economic Impact of the 2003 Medicine Hat JazzFest



■

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In association with
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■

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1.0 Executive Summary

This study, *The Economic Impact of the 2003 Medicine Hat JazzFest*, was conducted by Dennis McGuire, Ph.D., of the Department of Economics at Okanagan University College in Kelowna, BC.

The study employs the classic methodology of economic impact analysis to determine the gross and net economic impacts of JazzFest. Detailed findings of attendance volume, attendee demographics, the travel motivations of non-resident attendees, purchasing patterns, and per-person and aggregate dollar expenditures are included in this analysis. It should be noted that a conservative analytical methodology was employed throughout this study, thereby ensuring that all findings are defensible. It is possible that some findings in this report may err on the side of conservatism, however, we can assure that no findings have been inflated or exaggerated through an absence of methodological rigour.

Here are the key findings:

- JazzFest's earned revenues (tickets sales, concessions, souvenir sales and a compact disc commission) totaled \$23,272.
- The gross economic impact of JazzFest is \$261,570.
- The net economic impact of JazzFest is \$212,466.
- There were approximately 6,500 admissions to JazzFest. These 6,500 admissions represent about 3,500 people (ticket-buyers and non ticket-buyers).
- Of the 3,500 JazzFest attendees, approximately 625 attendees purchased tickets.
- 83 percent of JazzFest attendees were residents of Medicine Hat, while 17 percent were non-resident.
- Among non-resident attendees who purchased JazzFest tickets, 66 percent reported that JazzFest was the "sole reason", or "very important", in choosing Medicine Hat as a travel destination.
- Total expenditures of all JazzFest attendees exceeded \$122,000. Ticket-buying residents were responsible for more than \$46,000 in expenditures, while ticket-buying non-residents were responsible for almost \$24,000 in expenditures. The balance in expenditures (almost \$52,000) was due to ancillary expenditures by attendees who did not purchase tickets.
- Among non-residents who purchased JazzFest tickets, average per-person ticket purchases exceeded \$29. Average per-person meal expenditures exceeded \$74, and average per-person accommodation expenditures approximated \$43.
- Among residents of Medicine Hat who purchased JazzFest tickets, average total spending in association with the event exceeded \$89 per person. Of this amount, about \$39 was spent on JazzFest tickets, and about \$51 was spent on ancillary purchases.
- The net economic impact of JazzFest supports approximately 6 full-time equivalent jobs in the city of Medicine Hat.
- The education and income profile of non-resident attendees at JazzFest is much higher than the population average. Almost 72 percent of non-resident attendees earn more than \$45,000 annually. More than 40 percent hold a university degree.

2.0 Understanding Economic Impact Analysis

2.1 What is an economic impact analysis?

An economic impact analysis determines the magnitude of income and employment that can be attributed to the existence of a particular economic sector, institution, or event, in this case the Medicine Hat Jazz Festival. In determining the economic impact of a sector, an institution, or an event, three types of economic effects are examined: *direct effects*, *indirect effects*, and *induced effects*.

2.2 Direct effects

In this study, *direct effects* are the economic impacts that result from, (a) expenditures by non-residents who attend JazzFest, (b) expenditures by residents who attend JazzFest (provided these expenditures would not have been made on some other activity in the absence of JazzFest), and (c) contributions by businesses, individuals, and government.¹

2.3 Indirect effects

In this study, *indirect effects* are economic impacts that result from, (a) expenditures on goods and services by JazzFest, and (b) expenditures on goods and services by local businesses catering to non-residents who attend JazzFest.

2.4 Induced effects

In this study, *induced effects* are the economic impacts that result from, (a) the spending of income earned by employees, contractors, and businesses that work for JazzFest, and (b) the spending of income earned by those engaged in all businesses indirectly affected by JazzFest. As this earned income is spent, others individuals in the local economy earn new income, which induces further cycles of spending and earned income.

For example, if a patron purchases a JazzFest ticket, the revenue earned by JazzFest will have a *direct effect* on the local economy. *Indirect effects* occur when JazzFest uses its earned revenue to purchase materials and services from a variety of front-line suppliers. *Induced effects* occur as this same dollar is re-spent by these suppliers or their employees, and “ripples” through the local economy.

2.5 What is the “ripple effect”?

The spending and re-spending of dollars generated by JazzFest is known as the multiplier or “ripple effect”. It is this phenomenon that induces the economy to grow. In a community the size of Medicine Hat, Informetrica estimates the multiplier effect at 1.58² (see Section 4.12). In other words, the purchase of a \$10 ticket will result in \$15.80 in economic impact (i.e., \$10 x 1.58).

Multipliers in smaller and less self-sufficient communities tend to be less than in larger cities. In smaller communities, it is easier for money to leak out of the economy, creating economic activity elsewhere, rather than locally. *Leakages* or *withdrawals* can also occur when new income is saved or taxed, rather than spent.

¹ Informetrica, *Assessing the Local Economic Impact of the Arts*, p. 47.

² Ibid.

2.6 What is the “attribution principle”?

The main principle to be applied in defining the impact of JazzFest on the Medicine Hat economy is that of *attribution*. The key question is: “What new income in the local economy can be directly attributed to the presence of JazzFest in Medicine Hat?”

Some revenues or expenditures are *non-attributable* – that is, they cannot be attributed to the presence of JazzFest, as they simply displace other spending in the economy. For example, if a resident attends a JazzFest concert instead of going to a hockey game, that is not *new* spending attributable to JazzFest, but rather *displaced* or *diverted* spending that would have occurred anyway. These kinds of expenditures “therefore cannot be argued to attribute to an economic impact of an event as their impact would have been felt in any case.”³

2.7 What is the difference between gross and net economic impacts?

As a consequence of the attribution principle, we can differentiate between a *gross economic impact* and a *net economic impact*.

The *gross economic impact* of JazzFest is the entire economic activity generated by the event. The *net economic impact* is only the amount of spending that can be safely attributed to JazzFest.

For the purposes of demonstrating the economic impact of JazzFest to funders, the business community, the media and the citizens of the community, we recommend that JazzFest’s net economic impact be cited, not its gross economic impact. The true measure of JazzFest’s contribution to the local economy is its net economic impact.

2.8 What is ancillary spending?

Ancillary spending, which is included when calculating JazzFest’s gross and net economic impacts, captures (a) *local* expenditures made by non-residents who are attending JazzFest (e.g., spending on meals, accommodation, local transportation, and other tourist-related purchases), and (b) expenditures by residents that are attributable to JazzFest (e.g., dinner out before a concert, dessert afterwards, the purchase of a CD at a performance, the cost of a babysitter).

Ancillary spending has its own multiplier effect. Moreover, ancillary spending contributes significantly to the economic impact of JazzFest, because non-residents who attend JazzFest spend considerable sums on accommodation and meals.

³ Ibid, p. 25.

3.0 The Methodology

3.1 Who participated in the analysis?

To determine the economic impact of JazzFest, we analyzed the spending of the Festival's four major economic players: residents of Medicine Hat who attended the Festival, non-resident attendees at the Festival, governments, and sponsors.

3.2 How was data collected?

An intercept survey was used to capture spending by residents and non-residents who attended the JazzFest. Statements provided by Festival organizers detailed the expenditures made by JazzFest, along with government funding and sponsorship data.

3.3 The intercept survey

The data required for an economic analysis was collected specifically for this study. In total, 193 residents⁴ and non-residents completed an intercept survey while attending the five-day JazzFest event in June of 2003. Of these, 9 surveys were rejected, as they did not meet quality standards. Of the remaining 184 surveys, residents completed 89 surveys, and non-residents completed 95 surveys.

The interviewers who administered the intercept surveys were organized by the JazzFest committee into two or three-person teams. A copy of the survey instrument can be found in the Appendix, along with "interviewee count sheets" used to instruct interviewers on appropriate recording procedures.

Residents and non-residents were questioned about the number of performances they attended, expenditures at these performances, as well as ancillary spending. This methodology afforded a picture of the overall spending behavior of JazzFest attendees.

3.4 How much resident spending is attributable?

When interpreting the data gathered from intercept surveys, care was taken to adhere to the *attribution principle* outlined above. Only spending that could be confidently attributed to the Festival was considered in determining JazzFest's economic impact. In determining what portion of resident spending is attributable, the most conservative assumption is to assume that no spending is attributable. In other words, in the absence of JazzFest, all resident spending would otherwise occur locally.

This assumption, of course, is not defensible. However, in the absence of JazzFest, to assume that no resident spending would have occurred locally would overestimate the impact of JazzFest. Similarly, in the absence of JazzFest, to assume that all resident spending would have been saved rather than spent, or spent on a leisure activity outside of Medicine Hat, also overestimates the impact of JazzFest.

Accordingly, in this study, residents were asked if, in the absence of JazzFest, they would have partaken in a leisure activity outside the city of Medicine Hat. Spending by those who responded in the affirmative was then discounted from contributing to JazzFest's economic impact. In contrast, spending by those who responded in the negative was considered spending that could be counted - at least in part. This methodology for apportioning resident spending, according to the

⁴ "Residents" are defined as individuals who reside within the city limits of Medicine Hat.

principle of attribution, was intended to form the basis for calculating gross and net economic impacts in this analysis.

Regrettably, as is detailed in Section 4.9, this approach proved to be methodologically unsound. In place of our original methodology, we instead estimated the percentage of spending by Medicine Hat residents that could be attributed to JazzFest. In other words, in the absence of JazzFest, what percentage of resident spending would have been diverted to some other activity outside of *the jurisdiction of the city*?

There is no clear answer to this methodological conundrum. Neither is the literature of economic impact analysis highly useful in this regard. In fact, it is too often the case in economic impact studies of the arts that 100 percent of resident spending is treated as attributable – an indefensible assumption that inflates the arts’ economic impact.

In the absence of any clear precedent for the attribution of resident spending at JazzFest, this analysis apportions attributable resident spending at 50 percent of total resident spending, a percentage that is both conservative and defensible. (The apportioning of attributable JazzFest spending by residents is further discussed in Section 4.9.)

3.5 Avoiding sample bias

JazzFest features a large, free concert on the Festival’s second-last day. In 2003, approximately 3,000 residents attended this Saturday night performance. In addition, JazzFest also includes a number of other non-ticketed events. To avoid bias in sampling estimates, non-ticket purchasing Festival attendees were separated from those who purchased tickets when calculating average per-person expenditures in association with JazzFest. The average per-person expenditure for ticketed and non-ticketed events was then multiplied by the estimated number of attendees at each type of event. This same methodology was employed when calculating non-resident expenditures.

3.6 Surveying non-resident attendees

The surveying of non-resident JazzFest attendees afforded the opportunity for a more precise measure of attributable spending than the surveying of residents allowed.

When administering the survey, interviewers asked non-residents, “How important was JazzFest in choosing Medicine Hat as a destination for your travel?” If a non-resident responded that the Festival was the “sole reason” for visiting Medicine Hat, 100 percent of the individual’s spending was treated as attributable. If the Festival was considered “very important,” 66 percent of the individual’s spending was treated as attributable. A response of “somewhat important” resulted in 33 percent of the individual’s spending being treated as attributable. Finally, where a non-resident responded that the Festival was “not important” in choosing Medicine Hat as a destination, none of the individual’s spending was treated as attributable, even though the visitor spent money on performances, meals and accommodation while in the city.⁵

Attributable non-resident spending is a critical element in calculating the impact of JazzFest. This spending represents an “injection” of new dollars into the local economy. The multiplier effect further magnifies the impact of these new dollars.

⁵ It could be argued that the performance expenditure should be considered as attributable spending, since the visitor “discovered” JazzFest after arriving in Medicine Hat, and, as a consequence, chose to attend a performance. However, if this exception were made to the “rule of 0 %”, then an equal and opposite correction would need to be made to the “sole reason” / “rule of 100 %” respondent, by subtracting any expenditures, other than at JazzFest, that were made after arriving in Medicine Hat and discovering other leisure opportunities. It is simpler – and more methodologically sound – to remain rigid concerning the attribution of expenditures based on the motivation for visiting Medicine Hat, regardless of the purpose of any specific expenditure.

Among non-residents who came to Medicine Hat solely because of JazzFest, the amount of spending that is attributable to the event is much higher than attributable spending by residents. Moreover, ancillary expenditures by non-residents on accommodation and meals are entirely attributable to JazzFest, because they were made as a consequence of the Festival having attracted the non-resident to Medicine Hat in the first place. Ancillary expenditures made by non-residents can easily dwarf their direct expenditures at JazzFest.

3.7 Government funding and sponsorships

The JazzFest committee provided detailed statements outlining all sources and levels of government funding, as well as business and individual sponsorships. These statements also included all expenditures made by JazzFest itself. The JazzFest committee indicated all non-local expenditures, which, as leakages, were then removed from the impact calculations.

4.0 The Analysis

4.1 How many people attended JazzFest?

The preferable methodology for determining attendance at any event is to collect actual attendance figures. Using the 193 attendees who were sampled in the intercept survey, we inquired how many performances these attendees anticipated attending as the first step in a broader set of calculations designed to determine JazzFest's total attendance. However, estimates of the number of performances that attendees anticipated attending contained a significant overestimation bias. This, in turn, had the effect of *underestimating the number of people* who attended JazzFest. Because overall Festival attendance is a crucial variable in the analysis, we have substituted the following reasoned assumptions for our original methodology.⁶

The largest event at this year's JazzFest (Lee Aaron) was a free concert that attracted an estimated 3,000 attendees. This audience dwarfed the next largest event by a factor of six. Given that the Lee Aaron concert was the largest JazzFest event, it follows that *at least* as many people attended all JazzFest events, combined. If every individual who attended the Lee Aaron concert also attended another JazzFest event, 3,000 attendees would represent the entire JazzFest attendance. Although conceivable, this is highly unlikely.

Accordingly, to accurately determine the total number of JazzFest attendees, two other groups of attendees in addition to those who attended the Lee Aaron concert must also be considered: those who purchased tickets, and those who attended non-ticketed events other than the Lee Aaron concert.

According to JazzFest data, approximately 1,000 people were involved in ticket purchases. We assume that three quarters of all paying attendees made two separate ticket transactions, and that the remaining one quarter made one transaction. Consequently, we assume approximately 625 attendees were paying customers.⁷

We further assume that, in turn, three quarters of these paying customers attended the Lee Aaron concert. *Ceteris paribus*, Festival attendance must include at least 156 more people than attended the Lee Aaron concert, boosting the total to 3,156 Festival attendees.

Additionally, an estimated 1,500 people attended non-ticketed events other than the Lee Aaron concert. We assume that about 25 percent of this total did not attend the Lee Aaron concert, nor were they paying customers. Consequently, we add another 345 people to our attendee count, bringing the total attendance at JazzFest to 3,500 people.

Again, assuming 625 paid attendees at JazzFest, approximately 18 percent of the total JazzFest audience was comprised of paid attendees, while the remaining 82 percent, or 2,875 people, were complimentary guests of JazzFest. These percentages are applied equally in the analysis that follows, to both residents and non-residents, for lack of any evidence to the contrary.

Utilizing a weighted average of attendance figures at the various venues, we estimate that 17 percent of the total audience was comprised of non-residents, and 83 percent of the total audience was comprised of residents (Table 1, below).

Finally, we stress that the total attendance figure of 3,500 represents the actual number of people who attended the Festival (being careful not to double count). The JazzFest committee reports that 6,500 admissions, both paid and unpaid, were associated with all JazzFest performances.

⁶ We nevertheless include in Appendix 6.1 the original methodology we designed for estimating attendance.

⁷ By assumption, 750 transactions (75 percent) represent 375 people, while the remaining 250 transactions represent 250 people.

Table 1 Festival attendance

Attendees	Residents	Non-residents	Total
	2,905 (83%)	595 (17%)	3,500 (100%)
Paying attendees	520 (17.9%)	107 (17.9%)	627 (17.9%)
Non-paying attendees	2,385 (82.1%)	488 (82.1%)	2,873 (82.1%)
Total	2,905 (100%)	595 (100%)	3,500 (100%)

4.2 How did people hear about JazzFest?

Among surveyed residents, the media sources that created the greatest awareness of JazzFest were the *Medicine Hat News*, followed by CHAT TV, followed by the *Lethbridge Herald*. Comparing different media types, radio proved most effective in reaching the largest number of surveyed residents, followed by newspapers, television, and postering. Only one surveyed resident indicated that he learned about JazzFest via the Internet (Table 2, below).

Among surveyed non-residents, word of mouth was responsible for the greatest awareness of JazzFest, followed by the JazzFest brochure, followed by CKUA Radio. Comparing different media types, radio proved most effective in reaching the largest number of surveyed non-residents, followed by newspapers, the JazzFest brochure, and the Internet.

Table 2 JazzFest information sources

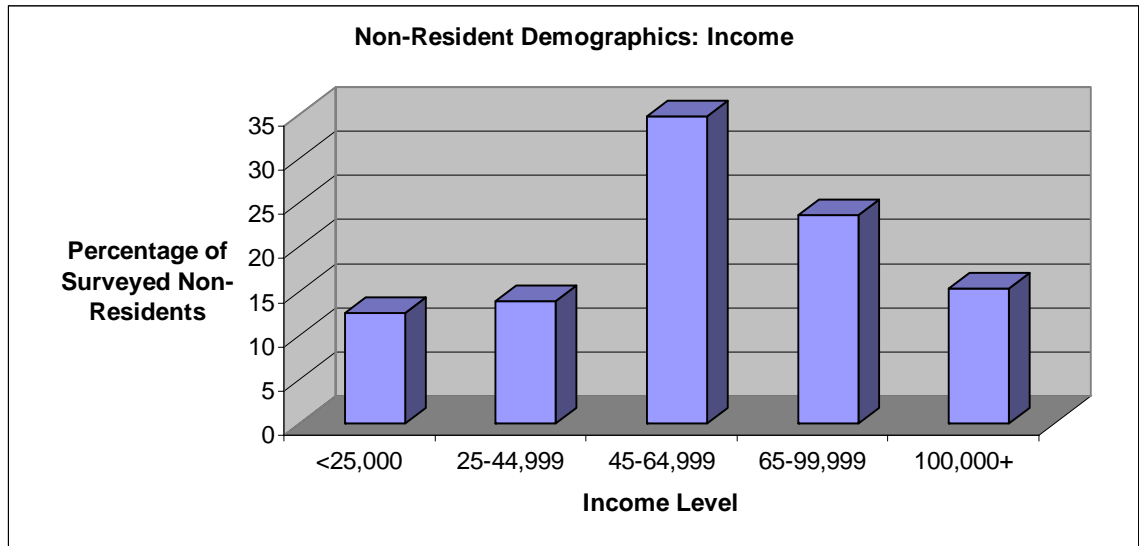
Source	Non-residents	Residents
Medicine Hat News	14	44
Lethbridge Herald	12	33
Brochure	21	8
Poster	11	27
Alive 99.5 FM	0	11
CKUA Radio	18	22
CBC Radio	10	14
My 96 FM	5	17
CHAT Radio	1	15
CHAT TV	0	36
Web Site	12	1
Word of Mouth	53	2

4.3 What is the income profile of non-resident attendees?

Among non-resident attendees at JazzFest, almost 35 percent of surveyed non-residents (the largest income cohort) reported earnings of between \$45,000 and \$65,000. Twenty-three percent of surveyed non-residents reported earnings of between \$65,000 and \$100,000. A surprising 15 percent of surveyed non-residents reported earning more than \$100,000. Only 27 percent of surveyed non-residents reported earning less than \$45,000.

This data confirms the above-average income profile that is typical of culturally oriented travelers (Chart 1, below).

Chart 1

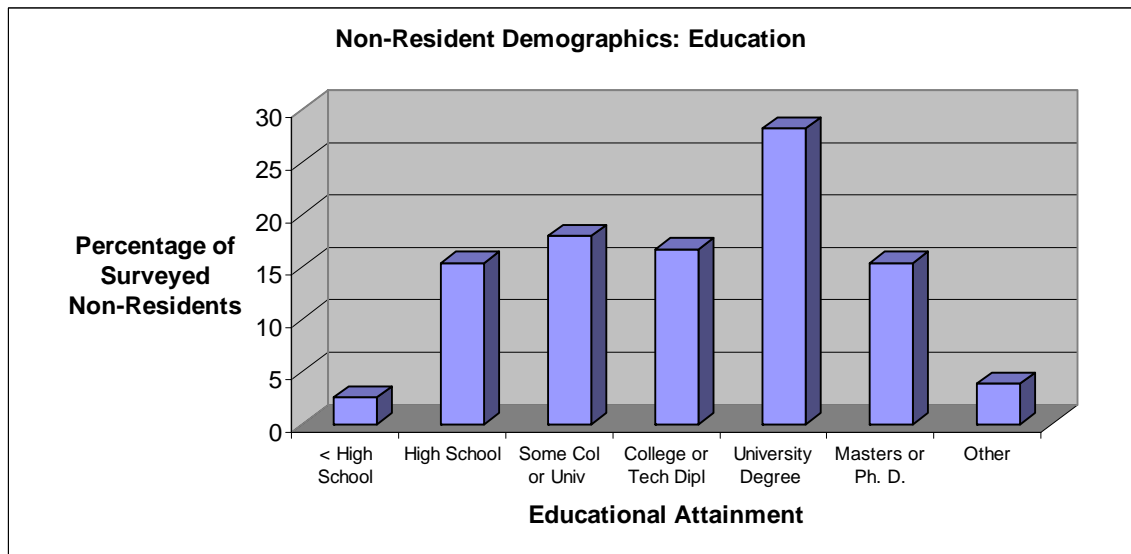


4.4 What is the education profile of non-resident attendees?

The educational profile of non-resident JazzFest attendees is strongly skewed toward higher educational attainment. More than 40 percent of surveyed non-resident attendees reported possessing an undergraduate, graduate, or post-graduate degree, with those who reported possessing an undergraduate degree representing 27 percent of the total.

A further 30 percent of non-resident attendees reported possessing either a college or technical diploma, or some college or university education. Fifteen percent of non-resident attendees reported possessing only a high school education (see Chart 2, below).

Chart 2



4.5 Among non-resident attendees, how important was JazzFest in choosing Medicine Hat as a destination?

Among surveyed non-resident attendees who purchased tickets, 66 percent reported that JazzFest was the “sole reason”, or was “very important”, in choosing Medicine Hat as a travel destination. Only 16 percent of surveyed non-resident attendees who purchased tickets reported that JazzFest was “not important” in their travel decision-making (Chart 3, below).

This profile contrasts sharply with that of surveyed non-resident attendees who did not purchase tickets. In this cohort, only 37 percent reported that JazzFest was the “sole reason”, or was “very important”, in choosing Medicine Hat. Fully 40 percent of surveyed non-resident attendees who did not purchase tickets (but attended one or more free performances) reported that JazzFest was not important in their travel decision-making (Chart 4, below).

This data clearly supports the hypothesis that most non-residents who purchased JazzFest tickets were culturally motivated travelers for whom JazzFest was a deciding factor in choosing to visit Medicine Hat.

Chart 3

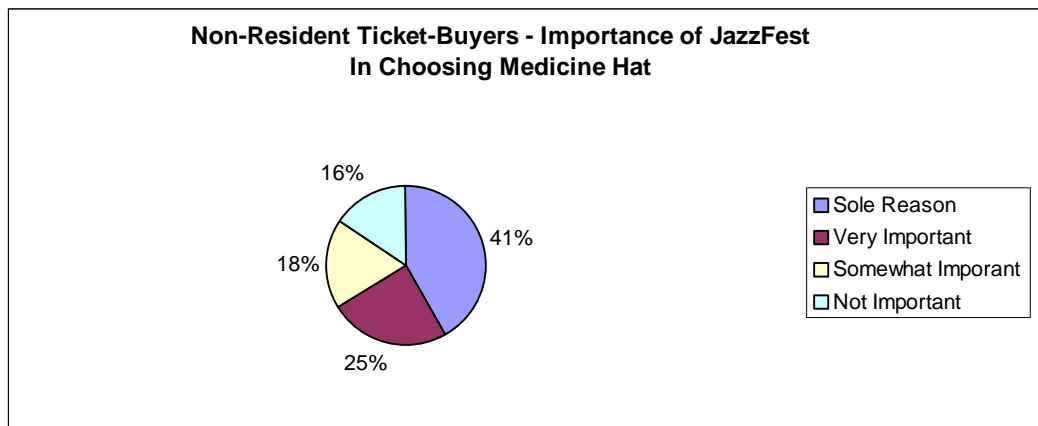
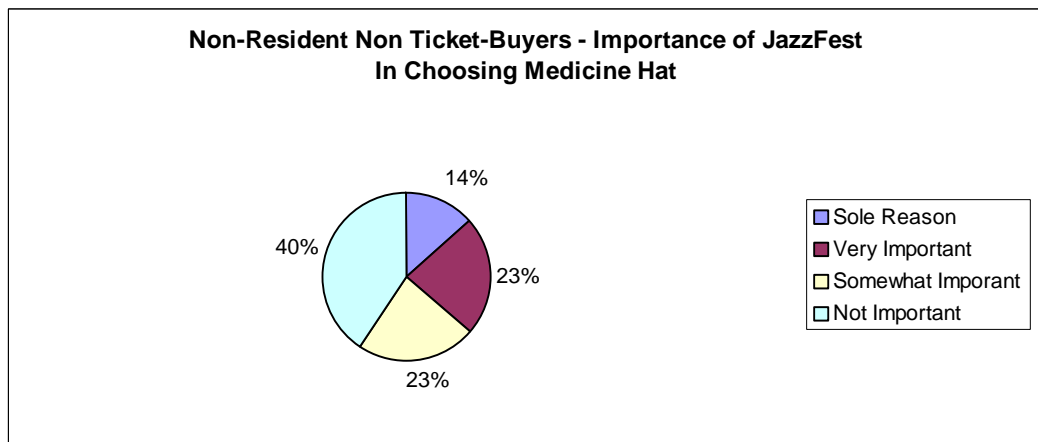


Chart 4



4.6 What were the gross expenditures of attendees?

Table 2 and Chart 5 (below) indicate the gross impact of JazzFest on Medicine Hat by residents and non-residents who attended the Festival. Almost \$47,000 in direct and ancillary expenditures was due to ticket-buying residents - the largest single source of gross expenditures related to JazzFest.

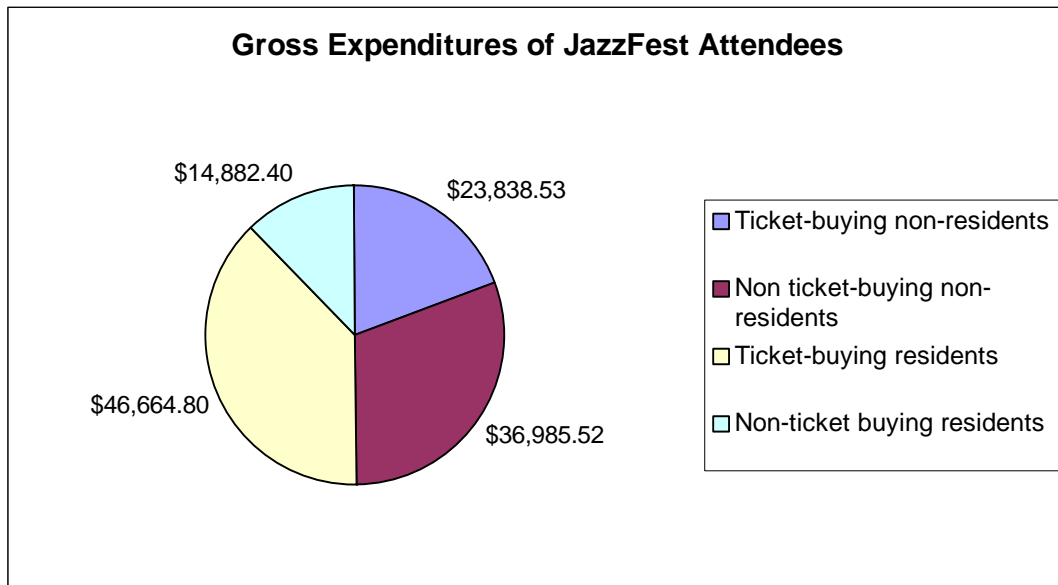
Non-ticket-buying non-residents were the second largest contributor to the gross impact of JazzFest, accounting for \$37,000 in gross expenditures. Despite not having purchased tickets, ancillary spending and the purchase of Festival-related items by this cohort generated significant economic activity.

Ticket-buying non-residents accounted for a gross impact of almost \$24,000, while the expenditures of non-ticket-buying residents approached \$15,000.

Table 3 Gross expenditures of attendees

Gross Expenditures	
Ticket-buying non-residents	\$23,838.53
Non-ticket-buying non-residents	\$36,985.52
Ticket-buying residents	\$46,664.80
Non-ticket-buying residents	\$14,882.40
Total	\$122,371.25

Chart 5



4.7 What was the distribution of purchases by non-resident attendees?

With respect to the distribution of purchases by non-resident attendees, ticket-buyers and non ticket-buyers exhibited similar spending behaviour. However, the magnitude of per-person spending by ticket-buyers was at least twice that of non ticket-buyers in each category of expenditure, excepting transportation. Clearly, on a per-person basis, non-resident ticket-buyers spent much more freely while in Medicine Hat than did non-resident non ticket-buyers. However, the much greater volume of non-resident non ticket-buyers (comprising 82 percent of all non-resident JazzFest attendees) accounts for their larger aggregate expenditures. It is worth noting that, among ticket-buyers, meals, accommodation, and miscellaneous expenditures far exceed expenditures on JazzFest tickets (Chart 6 and 7, below).

Chart 6

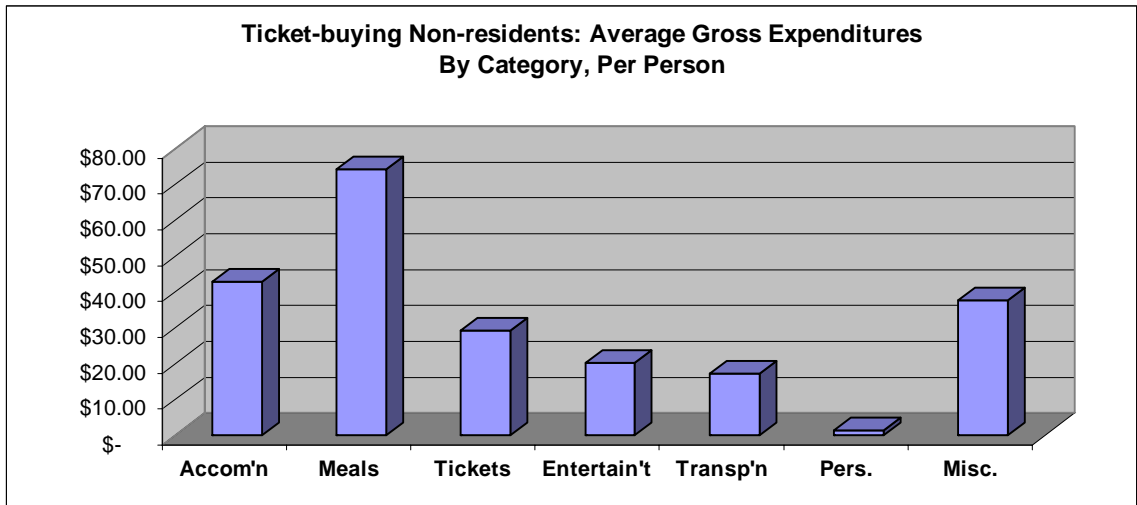
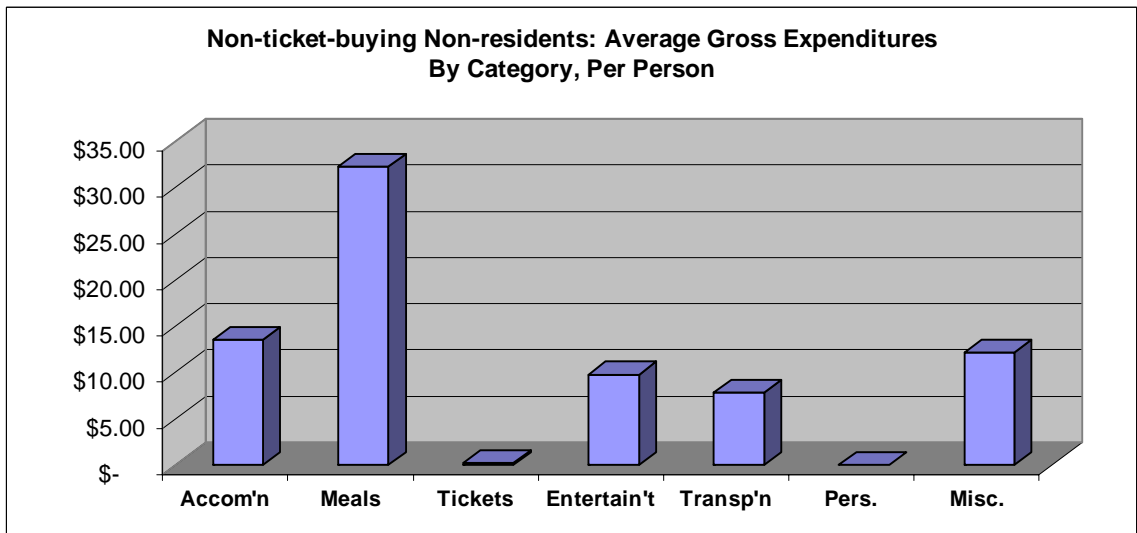


Chart 7



4.8 What was the average spending by resident attendees?

Among resident attendees at JazzFest, ticket-buyers averaged about \$39 per person on ticket purchases, and about \$51 per person on ancillary spending. Total spending by resident ticket-buyers who attended JazzFest was approximately \$90 per person (Chart 8, below).⁸

In contrast to resident ticket-buyers, spending by resident non ticket-buyers averaged more than \$6 per person, with this sum being entirely attributable to ancillary purchases. However, the volume of non-ticket buying residents who attended JazzFest boosted the overall economic contribution of this cohort (Chart 9, below).

Chart 8

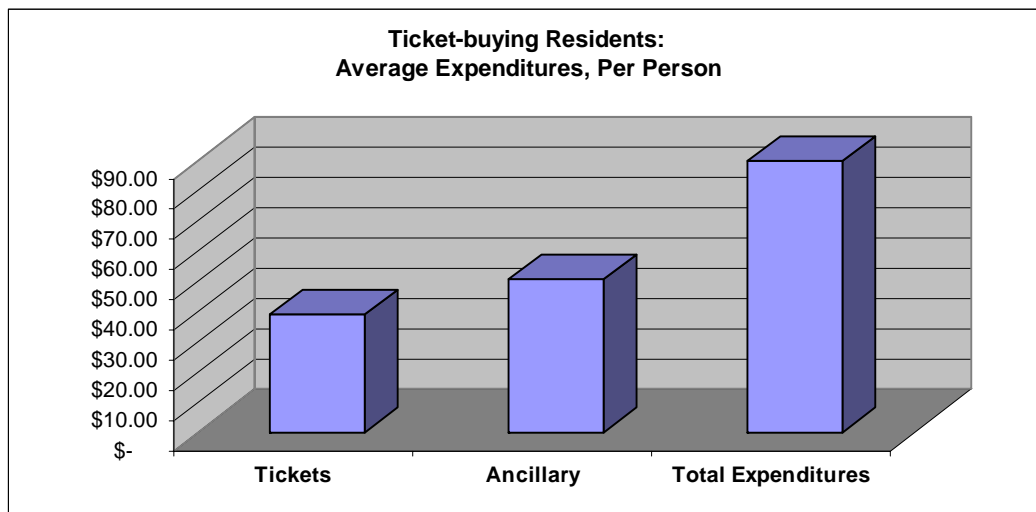
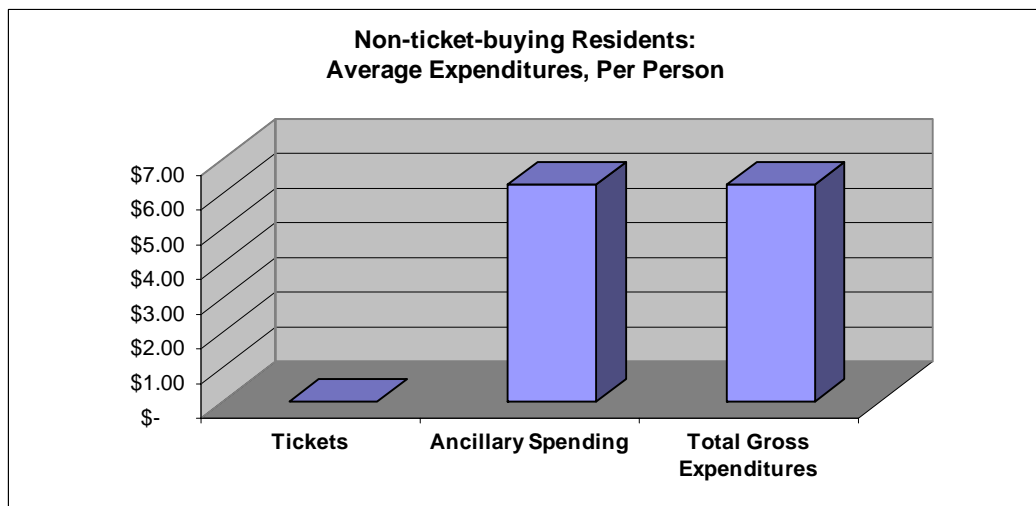


Chart 9



⁸ Discrepancies between the data contained in the text and the bar graphs shown in Chart 8 (and elsewhere) are due to imprecision in the Excel program. In all instances, the data contained in the text is accurate.

4.9 What were the net expenditures of attendees?

Gross expenditures treat all local spending as attributable spending, and thus represent the upper conceptual boundary of JazzFest’s economic impact. In contrast, net expenditures capture only that measure of local spending that is considered attributable. Calculations of JazzFest’s net expenditures exclude all diverted spending – spending that is diverted from one activity to another. For this reason, net expenditures are used for determining net economic impacts.

Attributable spending by non-residents at JazzFest was determined by multiplying the Festival-related expenditures of non-residents by “attribution coefficients”. These coefficients, discussed in Section 3.6, reflect the extent to which JazzFest was accountable for spending by non-residents. Attributable spending by ticket-buying non-residents amounted to more than \$16,000, while attributable spending by non-ticket-buying non-residents was more than \$13,000.

Two methods were used to calculate attributable spending by residents. The first method, which proved methodologically unsound, was to ask the resident, “Have you chosen to stay at home for JazzFest rather than travel to another city for leisure activity?” It was reasoned that, where individuals responded in the affirmative, they should be treated as “visitor in their own town”, ascribing to them expenditures in an order of magnitude that mirrored the estimated expenditures of non-resident attendees at JazzFest.

As it turned out, residents reported a strong affection and loyalty to JazzFest. Seventy-three percent of ticket-buying residents reported that their affinity for the Festival kept them in Medicine Hat during the week of JazzFest. Additionally, 71 percent of non-ticket-buying residents reported that free JazzFest performances provided sufficient cause for them to forego out-of-town travel. Although this loyalty to JazzFest is impressive, it results in a level of attribution that creates an impact that *exceeds JazzFest’s gross economic impact*. Clearly, a methodology that, when calculating attributable spending, treats residents as if they are “visitors in their own town”, cannot be defended (Table 4, below).

Forced to abandon our original methodology for calculating attributable spending by residents, we have instead employed reasoned assumptions for the degree of attributable spending by residents. We assume that 50 percent of resident spending at JazzFest, as well as ancillary spending related to JazzFest, is attributable to the event. This infers that 50 percent of residential spending was diverted from other activities in Medicine Hat. Using this methodology,⁹ ticket-buying residents accounted for more than \$23,000 in attributable spending, while non-ticket-buying residents accounted for more than \$7,000 in attributable spending. This methodology places the overall net spending of all JazzFest attendees (resident and non-resident) at more than \$60,000 (Table 5, below).

Table 4 Net expenditures of attendees

Net Expenditures: Method 1 (abandoned)

Ticket-buying non-residents	\$16,147.37
Non-ticket-buying non-residents	\$13,293.12
Ticket-buying residents	\$57,281.64
Non-ticket-buying residents	\$46,386.70
Total	\$133,108.83

⁹ This methodology has been employed elsewhere, most recently in, *The Economic Impact of Arts and Culture on the City of Nelson*, a study conducted in 2003 by Commonwealth Historic Resource Management Inc., of Vancouver, for the Nelson and Area Economic Development Corporation.

Table 5 Net expenditures of attendees

Net Expenditures: Method 2 (adopted)	
Ticket-buying non-residents	\$16,147.37
Non-ticket-buying non-residents	\$13,293.12
Ticket-buying residents	\$23,332.40
Non-ticket-buying residents	\$7,441.20
Total	\$60,214.09

4.10 Government funding and sponsorships

Businesses (and individual sponsors) made attributable cash and in-kind contributions to JazzFest valued at \$83,887. Attributable government funding totaled \$42,491. As 100 percent of this spending (\$126,378) is deemed attributable spending, gross and net economic impacts are one and the same.

Adding the attributable spending of residents, non-residents, governments, businesses and individual sponsors, gives us a total attributable economic impact of \$186,593, prior to netting out leakages or withdrawals resulting from the Festival.

4.11 Leakages or withdrawals

One of the larger, more obvious components of JazzFest withdrawals or leakages from Medicine Hat is due to visiting artists. Earnings that left the city amount to over \$20,000. Other minor leakages brought withdrawals to \$22,013.

Further, there is a component of spending by visitors and residents alike that, although it occurs locally, involves the purchase of a good or service (or some component thereof) that originates outside Medicine Hat. Examples include gasoline and meal purchases. In the case of meals, the food may be prepared locally, but a significant portion of the raw ingredients is imported from outside the city. We make the conservative assumption that 50 percent of all gross expenditures by residents and visitors alike (\$61,185) occurred on non-local purchases. Consequently, overall gross withdrawals total \$83,198 (i.e., \$22,013 + \$61,185).

Similarly, we assume that 50 percent of all net expenditures by residents and visitors alike (\$30,107) occurred on non-local purchases. Consequently, overall net withdrawals total \$52,120 (i.e., \$22,013 + \$30,107).

4.12 Net injections, the multiplier, and induced spending

The first rounds of direct and indirect spending by the four major economic players in JazzFest (residents of Medicine Hat who attended the Festival, non-resident attendees, governments, sponsors,) put money into the pockets of persons employed in, for example, the local music sector, the accommodation sector, and the restaurant sector. This new income is income that otherwise would not have flowed to these sectors. This new income then creates more spending which, in turn, generates more income in other sectors.

Ultimately, these rounds of spending and re-spending that ripple through the economy are exhausted because, whenever a new round of income occurs through new spending, a good portion of that income leaks away into savings, taxes, and spending on goods and services imported from outside Medicine Hat.

Informetrica estimates the magnitude of the multiplier for a city the size of Medicine Hat at 1.58. In other words, every \$1 of direct and indirect spending associated with JazzFest induces an extra \$0.58 of spending. As a result, \$1.58 is infused into the local economy.

With respect to JazzFest, net injections (injections minus withdrawals) of \$134,000 into the Medicine Hat economy induced an additional \$78,000 in spending.

5.0 Conclusions

5.1 Gross economic impact of JazzFest

To arrive at the gross economic impact of JazzFest, we total the gross direct and indirect local spending by all economic players at JazzFest, minus withdrawals, and add to this sum the induced spending generated by JazzFest. Accordingly, we estimate that JazzFest had a total gross economic impact on Medicine Hat of more than \$261,000 (Table 6, below).

Table 6

Gross Economic Impact

Injections

Visitors	\$ 60,824.05
Residents	\$ 61,547.20
Investment	\$ 83,887.75
Government	\$ 42,491.00
Total Injections	\$ 248,750.00

Gross Withdrawals \$ 83,198.94

Net Injections (direct and indirect spending) \$ 165,551.06

Induced Spending¹⁰ \$ 96,019.62

Total Gross Economic Impact \$ 261,570.68

5.2 Net economic impact of JazzFest

To arrive at the net economic impact of JazzFest, we total the net local direct and indirect spending by all economic players at JazzFest, subtract withdrawals, and add to this sum the induced spending generated by JazzFest. Accordingly, we estimate that JazzFest had a total net economic impact on Medicine Hat of more than \$212,000 (Table 7, below).

Table 7

Net Economic Impact

Injections

Visitors	\$ 29,440.49
Residents	\$ 30,773.60
Investment	\$ 83,887.75
Government	\$ 42,491.00
Total Injections	\$ 186,592.84

Net Withdrawals \$ 52,120.37

Net Injections (direct and indirect spending) \$ 134,472.47

Induced Spending¹¹ \$ 77,994.03

Total Net Economic Impact \$ 212,466.50

¹⁰ Net injections times the induced component (0.58) of the regional multiplier (1.58).

¹¹ Ibid.

5.3 Employment impact

The latest Statistics Canada data indicates that average annual full-time earnings for a resident of Medicine Hat are \$38,681. For lack of available data on wage inflation in Medicine Hat, we make the assumption that there was none.

To determine the net employment impact of JazzFest, we divide JazzFest's net economic impact (\$212,466.50) by average annual full-time earnings (\$38,681). Accordingly, 5.5 full-time equivalent jobs within the city of Medicine Hat are attributable to JazzFest.

5.4 Impact of volunteers

The JazzFest committee reports that JazzFest volunteers donated an estimated 1,030 volunteer hours. Economists determine the impact of volunteer labour by calculating the opportunity foregone by volunteering, which is not being available for work at the going hourly wage rate. Accordingly, the value of volunteer work translates into an employment impact of 0.57 full-time equivalent jobs.

6.0 Bibliography

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7.0 Appendices

7.1 Original attendance calculations

The total box office count consists of the total of Festival pass purchases, other smaller package ticket sales, and all other individual ticket sales. One Fest Pass purchase counts for one Festival attendee regardless of the number of performances attended by the purchaser of that pass.

The same cannot be said for purchasers of other packages or individual tickets, because many people attended multiple performances, and may have purchased any number of different package/individual ticket sale combinations.

By treating each single ticket as a single attendance, each two-concert ticket as a double attendance, and each three-concert ticket as a triple attendance, we can calculate the total attendance at all performances by all non-Pass holders. Dividing this number by the estimated number of performances that non-Pass holders reported attending, we arrive at the number of non-Pass holders that attended the festival. Adding to this number to the number of Pass holders gives us the approximate total attendance at the Festival.

7.2 Intercept survey (p. 21, below)

7.3 Performer survey (p. 23, below)

7.4 Open venue count (p. 24, below)

7.5 Black box count and summary sheet (p. 25, below)